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**OBSERVATIONS**  
**ON THE**  
**PHRENOLOGICAL DEVELOPMENT**  
**OF**  
**BURKE, HARE, &c.**

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THE SCIENCE OF THE  
HUMAN MIND

BY  
JOHN HARRIS

OF THE  
UNIVERSITY OF OXFORD

IN TWO VOLUMES

OBSERVATIONS

ON THE

PHRENOLOGICAL DEVELOPMENT

OF

BURKE, HARRIS, &c.

THE SCIENCE OF THE  
HUMAN MIND



**OBSERVATIONS**  
ON THE  
**PHRENOLOGICAL DEVELOPMENT**  
OF  
**BURKE, HARE,**  
AND  
**OTHER ATROCIOUS MURDERERS;**  
MEASUREMENTS OF THE  
**HEADS OF THE MOST NOTORIOUS THIEVES**  
CONFINED IN THE EDINBURGH JAIL AND BRIDEWELL,  
AND OF VARIOUS INDIVIDUALS,  
ENGLISH, SCOTCH, AND IRISH,  
PRESENTING AN EXTENSIVE SERIES OF FACTS SUBVERSIVE OF  
PHRENOLOGY.

READ BEFORE THE ROYAL MEDICAL SOCIETY OF EDINBURGH,

By **THOMAS STONE, Esq.**

PRESIDENT OF THE ROYAL MEDICAL SOCIETY.

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Testor utrumque caput.

VIRG. *Æneid*, iv.

"Assail our facts, and we are undone; Phrenology admits of no exceptions."  
*Phrenological Journal*, vol. iii. p. 258.

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J. CUMING, DUBLIN.

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1829.



PHRENOLOGICAL DEVELOPMENT  
OF THE  
OBSERVATIONS



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BY THOMAS STOKES, ESQ.  
TREASURER OF THE ROYAL MEDICAL SOCIETY.

8429.

Printed by W. Green, Edinburgh.  
"I have not seen, and do not believe, that any individual of the class of thieves, or of any other class of criminals, has ever been known to be a phrenologist." — Edinburgh Review, vol. III. p. 230.

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J. GUTHRIE, DUNDEE.

1829



# OBSERVATIONS

## ON THE

# PHRENOLOGICAL DEVELOPMENT

### ERRATUM.

Page 18, line 5.—For, “and is absolutely and relatively,” read, “and *the former* is absolutely and relatively.”

THE circumstance of a regular course of lectures on Phrenology being yet publicly delivered in this city, and the acknowledgment that some individuals, not aware of the extent of the Phrenological delusion, yet hesitate to pronounce any opinion, either favourable or unfavourable to its pretensions, must alone plead my apology for directing the attention of a scientific Institution to an hypothesis which has been decidedly rejected by the most enlightened men in Europe, and which, from its earliest existence, has appealed rather to the credulity of the vulgar, than to the judgment of men of science. Astrologers, Metoposcopists, Physiognomists, and Chiromancers, have in every age arrogated to themselves a peculiar and superior insight into human nature ; and, by pretending to predicate, by external signs, the faculties and dispositions



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which influence the destiny of mankind, they have not failed to impose repeatedly on the understanding of the ignorant, and by appealing to accidental contingencies, which for a moment seem to favour their empirical speculations, they have occasionally taken by surprise the judgment of better educated individuals, who, after receiving the grossest fictions, in the belief that they are the soundest facts, become prepared to listen with a kind of religious gravity to the most ludicrous and incongruous assertions.

To trace the history of such conceits through the darker ages, in which they were first professed, is unnecessary ; I simply maintain, that the Phrenological indications by which it is at present pretended that the human character can be interpreted, are in every respect as unfounded, and can as little be relied on, as any of those old physiognomical superstitions, of which they originally formed a part, and to which they are still essentially allied. In confirmation of this assertion, I shall not enter into any psychological or physiological arguments, but proceed to communicate to the Society an induction of facts, on which alone I challenge the Phrenologists to peril the alleged veracity of their system.

The following are the enquiries which I have accordingly instituted.

I. *Does the Phrenological development of the murderer Burke correspond with his acknowledged character ?*

II. *Does the Phrenological development of his*



*infamous accomplice Hare correspond with his acknowledged character?*

III. *Is it possible to distinguish the crania of murderers from other crania, by the Phrenological indications attributed to them?*

IV. *Do the most notorious thieves possess the organ of Acquisitiveness larger, or that of Conscientiousness smaller, than individuals of exemplary character?*

The attention of the public has for some time past dwelt with painful interest on the atrocities that have lately been perpetrated by Burke, and his miserable confederate Hare; and although the hand of humanity would willingly draw a veil over the recollection of their enormities, yet, as they have been guilty of iniquities almost unexampled in the annals of crime, there can be little doubt that they will long rank among the most notorious and execrable murderers that ever disgraced the history of human nature. The cruelties repeatedly committed by them were indeed of the most deplorable and appalling description. They were not prompted by the excitement of provocation, or suggested by any frenzied desire of vengeance;—they were not committed in moments of sudden or impetuous passion, but all, on the contrary, was cold-blooded, selfish calculation; and no savage in the remotest wilds of Africa ever heard more unmoved, or exulted more deliberately, over the repeated death-groans of their victims.—“After they ceased crying and making resistance,” says the Confession of Burke, “we



left them to die of themselves, but their bodies would often move afterwards, and for some time they would heave long breathings before life went away."

As it is stated by Phrenologists, that deliberate and selfish murderers possess always a large endowment of the alleged organ of destructiveness, and as the atrocities of Burke and Hare are certainly of as great, or even greater magnitude, than any of those which were perpetrated by the criminals who supplied Gall and Spurzheim with the evidence by which they pretended not only to discover, but subsequently to establish this organ,—so in the cases of the West Port murderers, each should, on Phrenological principles, possess it exceedingly well developed.

#### I.

*Does the Phrenological development of Burke correspond with his acknowledged character?*

On the morning after the execution of this criminal, his body was at an early hour conveyed to the anatomical rooms in the College, and our distinguished and popular Professor Dr. Monro, gave the same morning a public demonstration of the brain. In the course of this dissection nothing remarkable was observed, excepting a certain degree of softness of the cerebral substance, which has been noticed by the learned Professor in the brains of other criminals also examined under similar circumstances, and which he is inclined to attribute to the lowness of the prison



diet some weeks previous to execution.\* It has been falsely and ignorantly stated to the public, that the lateral cerebral lobes were unusually developed, and the skull in that region rendered in consequence remarkably thin. Having made particular enquiries on this subject, I am enabled, on the best authority, to state positively, that no such remarkable development was observable. The attenuation of the bone alluded to refers to the squamous portion of the temporal bone, which is generally thinner than any other part of the cranium; and were the statement, therefore, even admitted to be correct, it would constitute no peculiarity in the skull of Burke. I may add, that I have examined many crania, in which, although the bones were much thinner generally, yet over the region of destructiveness they were much thinner and more diaphanous, than in this murderer, without the slightest external protuberance. The effect of any unusual fulness of the cerebral convolutions, seems indeed not to produce any elevation on the external table of the cranium, but simply to attenuate the internal, which is observable in the indentations of the *glandulæ Pacchioni*, which never produce any corresponding eminences on the external cranial surface.†

\* Monro's Morbid Anatomy of the Brain, p. 37, and 160.

† The relation which the external table of the skull bears to the internal is very ably and satisfactorily explained by Dr Milligan, in the *Appendix* to his valuable translation of Majendie's Physiology.

"The inner or vitreous table," says he (page 566), "performs uniformly one office; it closely follows and embraces the figure of the brain, receiving the impression of every convolution, and penetrating



The organ of destructiveness in Burke has been called *large*. I proceed to enquire into the correct-

into every fissure with as much exactness, though not quite so deeply, as the membranes themselves. Meanwhile, the *external table* is no more a mere organ of defence than the muscles which cover it; it is an organ of *coaptation* or *articulation*, and accordingly is found to be impressed, elevated, and configured, entirely, according to the necessities of this adaptation. Hence that line of it which corresponds to the transverse suture of the face is exactly adapted to the bones of the opposite margin of this suture, being thick where they are thick, thin where they are thin, serrated where they are serrated, and harmonic where they assume this appearance. It exhibits no relation to the internal table, till, being again turned inwards along the roof of the orbit, it re-approaches and coincides with it to form the thin edge, which, like another squamous portion, is to ride upon the *alæ minores* of the sphenoid bone. *The external table, then, of the frontal bone is in reality a bone of the face. Hence its development—or growth depends entirely on the growth of the bones of the face; for it has never been seen narrower or broader than the distance from the external orbital process of the one malar bone to the other, nor placed so close to the internal table and crista galli, that it was overlapped by the bones of the nose, or by the superior maxillary and malar bones. It follows, then, from what is said above, that the development of the internal table, and consequently of the frontal bone, follows the development of the brain; but the development of the external table of the frontal bone follows the development of the bones of the face. Now the brain, we have seen, arrives at its full size in the seventh year, which, therefore, is the period for completing the development of the internal table of the frontal bone; but the bones of the face continue growing to the twenty-first year, and hence anatomists find the dimensions of the frontal sinus go on increasing to that year; and the same authors generally find the sinus commence at the seventh year, because that is the time at which the nutritious arteries cease to do more than support its vitality.*

The learned author then continues (page 598) to explain very



ness of this report, and shall compare it, both in its absolute and relative size, with the same organ in two series of crania.

1st, With 50 crania, principally British, collected by Sir William Hamilton, with the measurements of which he has kindly favoured me.

2d, With the 50 crania collected by Dr Spurzheim, and at present in the Edinburgh Museum; of which 37 are male, 13 female. These also form a part of Sir William Hamilton's extensive induction, and being a closed collection, which may be appealed to at any time, I refer to them with confidence.

To ascertain the size of the cranium, I have had recourse to two methods:—

1st, I have taken its lineal dimensions, including its length, breadth, and height; the latter being obtained by measuring, with the callipers, from the anterior edge of the foramen magnum to the bregma.

2d, I have referred to the capacity of the cranium, or the weight of encephalon contained in each, which is ascertained by filling the skull with

clearly the formation of the *frontal sinuses*, and wherefore, in some cases, they are altogether wanting. His explanation of the relation of the external to the internal cranial table applies not to the bones of the skull only, but to all the flat and cylindrical bones of the body; and certainly Dr Milligan is entitled to much praise for having been the first to perceive, and satisfactorily expound, a law which appears to influence the whole osseous system.



sand, weighing the quantity each contains, and reducing the specific gravity of the sand to the specific gravity of the brain.

I give, first, the *absolute* size of the several organs; secondly, their *relative* size, or the proportion which each bears to the contents of the skull, or to the weight of the encephalon. The latter, in consequence of crania being sometimes broken, it is not always possible to obtain, and in those examples the lineal dimensions are referred to. It is therefore of importance to notice, that I have found, from an induction of upwards of a hundred crania, that the proportions of the organs to the various sizes of crania, have borne a general relation to the proportions of the same organs to the same encephala. I give the result of my induction disjunctively, as well as concretely, to prevent the suspicion of any anomalous cases having affected the general average.

The size of Burke's cranium is 18 *inches*.

The weight of his encephalon 20507 *grains*.

From destructiveness to destructiveness measures 5.35 *inches*.

The proportion of destructiveness to the size of the skull is as 1 to 3.364.

The proportion to the encephalon as 1 to 3833.084.

On referring to Sir William Hamilton's General Table of adult male crania, I find, of fifty in which the measurement from destructiveness to destructiveness was taken, 8 are  $\frac{1}{20}$  *above* Burke, 29 are still *larger*, 13 only are *less*.



The *average* size of these crania estimated by the lineal dimensions of length, breadth, and height, is 18.2 inches.

The *average* size of the organ of destructiveness is 5.5 inches.

The proportion of destructiveness to the general size, on the general average of these crania, is as 1 to 3.309.

The results of the induction from these 50 crania are—

*First*, 37 of the 50 have the organ of destructiveness in its *absolute* size *larger* than Burke.

*Second*, The organ of destructiveness in Burke is in its *absolute* size *below* the average of these 50 crania.

*Third*, The *relative* size of the organ of destructiveness, or its proportion to the lineal dimensions of the cranium, is in Burke also *below* the average.

I proceed next to the second series of crania to which I have adverted, the collection of Dr Spurzheim in the Edinburgh Museum, the measurements of which are given in a table presenting a view of the absolute sizes of the several organs, and their individual proportions to the encephalon.\*

The average *absolute* size of the organ of destructiveness in these 37 male crania is 5.6 inches.

The average *relative* size of the organ of destruc-

\* See Table I. Measurements of adult male crania.



tiveness, or its average proportion to the encephalon, is as 1 to 3634.261.

Of these 37 crania, taking them disjunctively, 34 have the organ of destructiveness in its *absolute* size *larger* than Burke—27 have it *larger* in proportion to the encephalon.

The result is that, when compared with these 37 crania, the organ of destructiveness in Burke is both absolutely and relatively *below* the average size.

Having established this fact by the most direct and conclusive evidence that can possibly be obtained, it cannot fail to illustrate, in a very striking manner, the fallacy of this phrenological indication.

This murderer, it should be remembered, was not instigated to the commission of crime by the want of those common necessities of life which have sometimes urged the victim of poverty to become the victim of guilty desperation. He was, although a stranger, and poor, when he arrived in Edinburgh, a man who had borne a respectable character, and might have procured some honest employment; but it appears that, one evening, when sitting by the fireside with Hare, they overheard a woman lodger breathing heavily in her sleep, on which Hare remarked, “Do you hear that? it would not be difficult to take her where we took Donald,” a poor pensioner who had some days before expired in the same room, and whose remains they had subsequently sold. The diabolical suggestion was no sooner given utterance to, than Burke readily acquiesced, observing that they might have recourse to the method



adopted by Hazael, when he destroyed Benhadad the King of Syria, by dipping a cloth in water, and covering his mouth. The hint was immediately put in practice,\* and from that night a deliberate system of murder was carried on, the aggravated horrors of which transcend all possible description, and do more than realize the most tragical scenes that "fiction ever feigned, or fear conceived." Nor does the disposition of Burke seem to have been influenced by any remarkable desire of gain, or acquisitiveness. He allowed Hare and his wife, it appears, to share the greater part of the blood-money they obtained; and Hare himself acknowledged that Burke was always very ready to give away his money, and free with it among those of his companions who were poorer than himself. On one occasion, a Student having purchased and paid him for the extremity of a subject, Burke received the price of the body to the full amount, on which he immediately sought the Student, and, of his own accord, refunded him the money.

Neither were the murders of which he was guilty committed only in moments of excitement from intoxication; it appears by the evidence that he never lost his self-possession from the effects of drinking, and the address with which he contrived so frequently to impose on his unfortunate victims, proves him to have been the very man who could "smile, and murder while he smiled;" and who took a deliberate

\* This anecdote is given in the Evening Courant, February 7, 1829.



and fiendish pleasure in multiplying the number of his atrocities. Throughout his guilty career, he manifested, to a singular extent, all the attributes which are by Phrenologists referred to the supposed organ of Destructiveness, which, so far from possessing any characteristic development, is the very reverse of the condition it should have exhibited, in order to accord with one of the most fundamental propositions of the Phrenological theory.

The organ of Benevolence next claims consideration; and surely never did any individual more completely divest himself of all the commonest sympathies of humanity than Burke? He had indeed so familiarized his mind to scenes of murder, and his heart, hardened with excess of crime, had become so callous, that he not only viewed with disregard the anguish of the sufferers who were immolated on the infernal altar of his iniquity, but seems coolly, in the midst of his atrocities, to have reconciled himself to the ignominious fate which he knew awaited him. So frequently had he grappled with the dying—so often had he hurried his victims into the arms of Death,—that he seems for a time to have viewed with indifference the terrors of his countenance. The day before his execution, he stated that, in his soberest moments, he frequently used to reflect that he should one day be hanged, and often accustomed himself to consider how, when the time arrived, he should conduct himself on the scaffold. His savage disposition frequently manifested itself, and more than once he beat the woman with whom he cohabited, in so barbarous a manner, that



medical assistance was obliged to be procured for her. The organ of Benevolence on the skull of Burke, measures from the meatus 5.1.\* Its proportion to the encephalon is as 1 to 4020.980. On referring to the table of adult male crania, the average size of Benevolence in the 37 crania, is 5.011. Its average proportion to the encephalon is as 1 to 4089.288.

Taking them disjunctively, 9 of these have the organ of Benevolence in its *absolute* size the *same* as Burke; 20 in its *absolute* size *less* than Burke; 22 have it less in its *relative* size, or in its proportions to the encephalon.

The organ of Benevolence in Burke is, it will be seen, both *absolutely* and *relatively* above the *average* size of the same organ in these 37 crania.

On this fact it is unnecessary to comment; I am indeed aware it has been stated by some of the most distinguished of the Edinburgh Phrenologists, that, in accordance with the large development of the organ, Burke was really a benevolent man; but I apprehend the public generally will maintain a very different opinion, and to argue the point seriously would be to indulge in one of the severest satires that can be conceived, on the incongruity of the phrenological doctrines.

\* This measurement was taken after the horizontal section of the skull had been made, and as in the sawing some portion of bone must have been lost, the organ measured even more than I have estimated it; for, giving the Phrenologists every advantage, I have made no allowance for this, although it is clear that at least 1-10th may on this account fairly be added.



I next proceed to the organ of Conscientiousness. This organ in Burke measures from the meatus 4.6. Its proportion to the encephalon is as 1 to 4458.043.

On referring to the table of adult male crania, it will be seen that the average *absolute* size of the organ of Conscientiousness is 4.462. The average *relative* size is as 1 to 4585.414.

Taking the crania disjunctively, 9 possess the organ of Conscientiousness in its *absolute* size; 21 in its relative size *less* than Burke.

The result is, that Burke possesses the organ of Conscientiousness both absolutely and relatively *above* the average size.

The organ of Amativeness next deserves particular attention, as Burke manifested the propensity attributed to it in an excessive degree. He married at an early age, and on the pretext of a quarrel with one of his wife's relatives, left her, and absconded with another woman; and even when living with her, maintained another profligate in the Canongate, at his own expense, with whom he as systematically cohabited. The Phrenologists have themselves averred, that the large development and abuse of this organ, was in a great measure the cause of his entering on so fatal a career of crime. They have therefore announced that it was large;—this I deny.

In the paper I had the honour of reading to this Society in 1825, I observed that the phrenological casts of murderers, for the following reason, never can be relied on: When the criminal, having been executed, is cut down, the body is thrown generally

upon its back, and the blood, which, in cases of death by lightning, drowning, hanging, &c. remains uncoagulated, gravitates to the most depending parts of the person, a considerable distension of the muscles of the back, neck, and posterior parts of the head, is thus produced ; and over this distension the cast is usually taken. The organs of the alleged animal propensities are in consequence made to appear very large, whilst those to which the intellectual faculties and moral sentiments are ascribed, for the same reason, and from the contrast, present as remarkable an appearance of deficiency. Such was the condition of the head of Burke at the time when Mr Joseph took the cast of it, which, in this, as in other instances, forms a part of the erroneous data on which Phrenologists accustom themselves to reason.\* The organ of Amativeness may *then* have appeared *large* ; but this only affords an additional illustration of the impossibility of forming, from external inspection under such circumstances, any correct idea of the size of the cerebellum.

Here I must acknowledge myself indebted to Sir

\* It is acknowledged that the organ of Destructiveness, owing to the " swelling of the integuments," measures on the cast of Burke 2-8ths more than it did on the head during life. Why has not an acknowledgment of a similar kind been made in reference to the busts of Haggart, Pallet, Thurtell, Mackinnon, &c.? Are the Phrenologists not aware that such must have been the case in *every* criminal whose cast has been taken under similar circumstances? How is it possible to judge of the *relative* development of any of the supposed organs, when the posterior and posterio-lateral parts of the head are in this state of congestion?



William Hamilton, who has favoured me with a comparison of the weight of Burke's cerebellum, with the cerebella of various classes of subjects. We need not, in the present instance, therefore, trust to the report of any external manipulation, as we thus have it in our power to set all conjecture at rest, by appealing to the most satisfactory and conclusive evidence. From this comparison it appears;—

1st, The cerebellum of Burke is *less* than the average of *all* the adult *males*. (Twenty in number.)

2d, It is *less* than the average of *all* the *impuberal males*, from *three* years of age to *fifteen*. (Seven in number.)

3d, It is *less* than the average of *all* the *adult women* under *sixty*. (Fifteen in number.)

4th, It is *less* than the average of *all* the *impuberal males* above *four*. (Two in number.)

On comparing the size of Burke's cerebellic cavities with those of the different classes of subjects in Sir William Hamilton's table of open crania, they are;—

1st, *Less* than the average of the *male adult* crania. (Thirty-three in number.)

2d, *Less* than the average of the *female adult* crania. (Thirty-two in number.)

3d, *Less* than the average of the *female impuberal* crania, from *four* to *twelve*. (Six in number.)

They are a little larger, however, than the *male impuberal* crania.

The morning I took the size of the cerebellic cavity in Burke; two subjects, one a woman of *thirty-eight*, the other a female child of *eight* years of age, happened to be lying on the table, with the crania open. I proceeded, therefore, to compare the size of their cerebellic cavities with Burke's. Sir William Hamilton was present, who, from his extensive experience and knowledge on this interesting point of controversy, predicted that the child and woman would be found to possess each a larger cerebellum than Burke. I confess I was somewhat sceptical as to the result of the experiment, but found, on measuring the dimensions, as follows:—

	Circumference.	Length.	Breadth.	Total Size.
Burke, . . .	7	2.8	1.8	11.6
Woman, . . .	7.1	2.8	2	11.9
Female child,	7.2	2.8	2.1	12.1

Hence both the woman and child proved to have the cerebellic cavities larger than they are found in the murderer Burke, and this will not fail to make the erroneous Phrenological assumption appear still more ridiculous, when it is considered, that so much of the moral degradation of this atrocious villain was referred to the size and abuse of an organ, which even an impuberal child of eight years of age possessed larger.

In addition to the number of facts which have been accumulated by Sir William Hamilton, and which constitute the extensive induction he lately communicated to the Royal Society, I cannot help re-



garding these also as strongly illustrative of his position, that while the cerebellum bears its largest proportion to the cerebrum at three years of age, the whole encephalon attains its full complement before the age of puberty, and is absolutely and relatively larger in the female than the male. It is certainly singular that physiologists have so little investigated this interesting subject of enquiry, and the scientific world will not fail to acknowledge itself indebted to the researches of Sir William Hamilton.

The public is aware that Burke suffered under a complaint which was of a scrofulous character ; and the following is a report of the pathological appearances which on dissection were presented. The account was originally drawn out by Mr Miller, the assistant of Dr Monro, and being purely of a professional nature, I have thought proper to present it in Latin.

“ Nefandi hujus homicidæ cadaver explorantibus, unus tantum testiculus, quod notatu dignum est, apparuit ; alter enim morbo, quo laboraverat, absorptus prorsus fuerat. Morbus iste testiculi exulceratio scrophulosa fuisse videtur, et ea infra posui, quæ post mortem detecta fuerunt. Scroti exterioris aspectus a sinistrâ quidem raphes parte naturalis erat ; a dextrâ vero ulcera complurima, sinuosa, ut ita dicam, inertia videbantur. Hæc scroti partem maxime occupabant eam, quæ, corpore erecto, femori interiori apposita est, eamque etiam ubi scrotum et femur inter se continua fiunt. Alicui minus curiose inspicienti hæc summæ cuti tantum adjacere, neque alte ad

testiculum ipsum penetrare viderentur. His tamen patefactis, externis involucris sublati, aliquantum humoris reperiiebatur coloris subflavi sive subfusci, ei similis qui sinibus foras effluebat. Ultra secantibus, a dextrâ, ne minimum quidem vestigium Tunicae vaginalis, *nihil testiculi*, apparuit; quorum quidem locum complebat materia quædam semi-fluida, pulla, nullo modo peculiari olens, meconium quodammodo referens, vix tamen pariter nigricans. Vesiculæ seminales solito ampliores erant, humoremque subfuscum intus habebant. Pluribus in locis scroti septum exesum erat et pauxillum ideo materiæ istius subatræ in sinistro quoque latere, ad partem tunicae vaginalis superiorem, et extra eam, repertum est. Eâdem materiâ etiam refertæ erant membranæ, quæ acceleratores urinæ obtegunt, adiposa et cellulosa. A sinistro latere, tunica vaginalis et testiculus naturali, quod ad fabricam, aspectu gaudebant; *hic autem testiculus certe minor erat solito*, longe aliter ac plerumque fit, ubi alter perierit testiculus. Chorda spermatica utrinque solitam superare magnitudinem inveniebatur."

As Burke had been labouring under this complaint for many years, according to the statement of Gall and Spurzheim, we ought to have found a diminution of the opposite lobe of the cerebellum; but no such difference was observed.

In the case of Bobby Auld, a celebrated idiot boy, who was well known in Edinburgh,—“cui mortem intulit ictus a calce asini in inguine acceptus, repertum est, *neutrum testiculum in scrotum descendisse*. Dexter sectione reclusus, parvulus, capiti cæco coli



adhærebat; *sinistri ne vestigium quidem reperiri poterat.* Chorda spermatica et vesicula seminalis utriusque lateris naturales erant; hinc, et ex natura et historia morbi verisimile videtur testiculum sinistrum prius extitisse, et postea massa morbida et spongiosa fuisse implicatum.”\*

In this instance, although the cerebellum was stated to be small, yet in proportion to the cerebrum it bears its appropriate size. The cerebellic cavity measures in circumference 7.6 *inches*; in length 2.5; in breadth 1.9;—Total 12, which is also larger than Burke’s.

I have now selected two of the most prominent features in the character of Burke:—*First*, His Destructiveness as a cold-blooded, systematic murderer. *Second*, His Amativeness, which is admitted to have been excessive; and, directing the attention of the Phrenologists exclusively to these manifestations, have proved them to be directly at variance with his Phrenological development. It is unnecessary to enter into minor details. My counter Phrenological propositions are;—

*First*, The organ of Destructiveness in Burke is absolutely and relatively *below* the average size, whilst Benevolence and Conscientiousness are absolutely and relatively *above* the average size.

*Second*, The cerebellum in Burke was also *below* the average size.

\* See Dr Ballingall’s Clinical Lecture for 1827.

## II.

*Does the Phrenological development of Hare correspond with his acknowledged Character?*

The evening before this miscreant was liberated from prison, with the assistance of an able Phrenologist, and in the presence of several individuals, some of whom were favourable, others adverse, to the Phrenological theory, I took the measurement of his head, of which the following is the report :—

Size of the head,	13.8 inches.
From the ear to Lower Individuality,	4.8
From ditto to Philoprogenitiveness,	5
From ditto to Benevolence,	5.4
From ditto to Conscientiousness,	4.6
From Destructiveness to Destructiveness	5.95
From Acquisitiveness to Acquisitiveness,	5.55
The proportion of Destructiveness to the size of the head, is as 1 to 2.319.	
The proportion of Benevolence to ditto, is as 1 to 2.555.	
The proportion of Conscientiousness to ditto, is as 1 to 3.	

After consulting a number of scientific authorities, and making a variety of experiments to determine which is the best method of ascertaining the size of the head, I have not found a better suggested than



that which is adopted by hatters, who add together the length and the breadth for the purpose of taking the mean diameter. To gauge its depth, or ascertain in any way the precise capacity of the living head, I find to be impracticable ; and having, as I have already stated, found on a large induction, that the proportions of the several organs to the lineal dimensions of crania, bear a general relation to the proportions of the same organs to the same encephala, I have adopted the method, to which hatters have recourse, for the purpose of giving the proportions of the organs to the diameter of the head.

On comparing Hare's organ of Destructiveness with my table of Englishmen, (twenty-eight in number,) I find

11 have it in its *absolute* size *larger* ; 6 in *absolute* size the *same* as Hare.

20 have it in proportion to the size of the head larger.

The average *absolute* size of the organ of Destructiveness in the twenty-eight Englishmen, is 5.953.

Its average proportion to the size of the head in the same, is as 1 to 2.282.

The result is, the organ of Destructiveness in Hare, is, in its *absolute* size, *not above* the average ; in its *relative* size, or in proportion to the dimensions of the head, it is *below* the average.

On examining my table of Scotchmen, (twenty-five in number,) I find

13 possess the organ of Destructiveness in its absolute size *larger* than Hare.

6 the *same*.

20 possess it *larger* in proportion to the size of the head.

The average absolute size of the organ of Destructiveness in the 25 Scotchmen, is 5.97.

The average proportion to the size of the head, is as 1 to 2.276.

The result is, that compared with my table of Scotchmen, the organ of Destructiveness in Hare is nearly the same in its absolute size as the average, the former measuring 5.95, the latter 5.97 *inches*; but in proportion to the size of the head, Hare's organ of Destructiveness is *below* the average.

On referring to my table of Irishmen, (twenty-seven in number,) I perceive

12 possess the organ of Destructiveness in its absolute size *larger* than Hare.

16 possess it larger in proportion to the size of the head.

The average *absolute* size of this organ in the 27 Irishmen is 5.907.

Its average proportion to the size of the head in same is as 1 to 2.308.

The result is, that compared with my table of Irishmen, the organ of Destructiveness in Hare is, in its *absolute* size, nearly the same as the average, the former being 5.907, the latter 5.95 *inches*; but in proportion to the size of the head, Hare's organ of Destructiveness is *below* the average.



From the general lowness of the head of Hare, the organs of Benevolence and Conscientiousness are both a little below the *average* size ; but so far from this constituting any peculiarity in his case, or being indicative of the character he manifested, several individuals in my Tables will be found to possess these pretended organs of the moral sentiments even still more deficient.

In my table of Englishmen,

3 have the organ of Benevolence in *absolute* size the *same* as Hare.

8 have it in *absolute* size *less* than Hare.

5 have it *less* in proportion to the size of the head.

In my table of Scotchmen,

2 have the organ of Benevolence in its *absolute* size the *same* as Hare.

4 have it in its *absolute* size *less*.

4, in proportion to the size of the head, have it *less*.

In my table of Irishmen,

7 have the organ of Benevolence in its *absolute* size the *same* as Hare.

6 have it in its *absolute* size *less*.

5 have it *less* in proportion to the size of the head.

Of the organ of Conscientiousness, it will be seen, in the Table of Englishmen, that

4 have it in its *absolute* size the *same* as Hare,

5 have it in its *absolute* size *less*.

In the table of Scotchmen,

6 have it in its *absolute* size the *same* ;

4 have it in its *absolute* size *less* than Hare.

In the table of Irishmen,

8 have the organ of Conscientiousness in its *absolute* size the *same* as Hare ; 2 *less*.

Hence, notwithstanding that the head of this murderer is characterised by a deficiency in the development of the alleged organs of Benevolence and Conscientiousness, many individuals of exemplary character are found to possess the same organs still more deficient ; and consequently, this configuration is by no means indicative of that moral degradation which the murderer exhibited. It should also be remembered that the persons whose measurements I have presented in my Tables, were taken *without any selection* ; for had I, in imitation of the Phrenologists themselves, proceeded on the principle of excluding from my induction all negative testimony, and given merely those examples which favoured my own views, I could have collected many more with the Destructiveness larger than Hare, and the presumed organs of Benevolence and Conscientiousness absolutely and relatively smaller. But by merely having recourse to indiscriminate measurements, several such have occurred, and consequently we are entitled to conclude that such a configuration cannot be relied on as an indication of moral depravity, but is a common condition of the head, which may co-exist with every variety of disposition.

The most remarkable, and best developed Phreno-



logical organ in the head of Hare, is his *Ideality*. At the time we took the measurement, one of the most highly-gifted and popular of our living poets was present, whose genius is peculiarly characterised by the vividness and power of its *idealism*. On applying the callipers to the organ of ideality in Hare, each leg of the callipers resting on the origin of the temporal muscle, and transferring them to corresponding points on the head of the poet, we found that Hare possessed a larger organ of ideality than the poet. When applied to the former, the callipers rested on the origin of the muscle; when we attempted to apply them to the latter, they came down far over the belly of the muscle. The experiment was several times repeated, and *from whatever point* of the organ the measurement was taken, the result proved to be the same. Hare's organ of ideality, also, is larger than the same organ in Sheridan, Sterne, Canning, Voltaire, and Edmund Burke, the distinguished and eloquent author of the Letters on the French Revolution.

Notwithstanding his superior development of the organ of ideality, it would be difficult to conceive a more stupid and miserable wretch than Hare.

When we visited him, he was not inclined to answer any questions, until repeatedly assured by the Governor that we were not sent by the Sheriff to make any investigation into the particulars of his case. To the enquiry, why, in Court, he had said it was indifferent which way he was sworn, and to the observation that we had understood he was a Roman

Catholic, he retorted, with a contemptuous sneer, he "did not rightly mind what he was." To the question, whether his conscience ever troubled him, he answered, with a laugh, "No, with the help of God." His whole demeanour was that of a man evidently devoid of every moral reflection, and he seemed, with his head adorned, as if in mockery of Phrenology, with large organs of Ideality, Causality, and Wit, to be only a few degrees removed from the very lowest of the brute creation.

The counter Phrenological propositions deduced from the case of Hare, are—

*First*, The organ of Destructiveness is in this atrocious murderer *not above* the average size.

*Second*, Many individuals of exemplary character, at the same time that they possess the organ of Destructiveness larger than Hare, exhibit a greater deficiency in the alleged organs of Benevolence and Conscientiousness.

I have not, it may be added, referred to the supposed organ of Amativeness, being satisfied that it is impossible to ascertain its size by any external manipulation. The uncertain and varying thickness of the muscles at the back of the head and neck, must alone oppose a very considerable impediment to any such pretension; in addition to which, it has been observed by Sir William Hamilton, that the superior external spine, which is supposed to correspond with the internal crucial spine of the occipital bone, and consequently to afford an indication of the height to



which the cerebellum ascends, frequently bears no such correlation. In a number of crania, he has observed that the internal crucial spine sometimes descends as much as an inch *below*, sometimes ascends as much as an inch, or more, *above* the line of the external occipital; and the latter, therefore, is no criterion by which the manipulator can judge of the size of the cerebellum.

### III.

*Is it possible to distinguish the crania of murderers from other crania by the Phrenological indications attributed to them?*

I need scarcely observe, that the following are the indications which Phrenologists attribute to the crania of murderers:—

- 1st, A large endowment of the organ of Destructiveness.
- 2d, A deficiency in the development of the alleged organs of the Moral Sentiments.
- 3d, A deficiency in the anterior cerebral development, or the quantity of brain before the ear; whilst the posterior cerebral development, or quantity of brain behind the ear, is supposed to bear the greater proportion to the size of the head.

Before communicating to the Society the result of my investigations on these subjects, I shall briefly refer to the crimes for which the several murderers

were executed, whose cranial measurements are included in this part of my induction.

### I. *Burke.*

The atrocities of this murderer have already been considered, and the propositions deduced from the measurements of his cranium fully stated.

### II. *Haggart.*

The particulars of the crime for which this murderer was executed must still be in the recollection of the public. He was an expert thief, and was hanged for murdering the turnkey of the prison in which he was confined.

### III. *Scott.*

This murderer was tried before the Court of Justiciary, at Jedburgh. By the evidence adduced on the trial, it appeared that, having quarrelled at Earlstoun fair with two men, his former companions, he overtook them on their road homewards, and barbarously murdered them; after which, he took a knife from his pocket, and mangled their bodies in a most savage manner. "He was unanimously found guilty, and sentenced to be executed as near the spot where he committed the murders as should be found convenient. During the whole trial, he behaved himself with great self-possession, and continued perfectly calm and composed after the fatal verdict was returned."\*

\* A particular account of the execution, dying declaration, and behaviour, of Robert Scott, who was executed on that part of the



V. *Anderson*.—VI. *Glen*.

These two men were executed in Ayrshire, for assaulting several people on their way home from church, and murdering two of them in a most brutal manner.

VII. *Balfour*.

This culprit was executed at Dundee, for murdering his wife, in a fit of jealousy.

VIII. *Gordon*.

This murderer was found guilty of killing John Elliot, a poor pedlar boy, rather weak in his intellect, at a solitary place on the farm of Upper Cassock, in the parish of Eskdalemuir, after which he robbed him of his pack. From the evidence, it appeared "that Gordon fastened himself on the unfortunate youth for three days, although they had no previous acquaintance, was seen entering with him into the wilds of Eskdalemuir, about three o'clock in the afternoon, and, on the evening of the same day, was seen emerging from these wilds *alone*, in possession of, and selling articles from, the pack, which was identified as having belonged to the murdered boy. It was further proved, that the instrument made use of in committing the murder was a clog which was worn by Gordon. The criminal behaved, during the address of the Lord Chief Justice, in a very unbe-

road between Earlstoun and Greenlaw, for the barbarous murder of two men, on the 30th of June last. James Docherty, writer.

coming manner, and, when the judge earnestly called on him to prepare for eternity, and to throw himself on the mercy of the Redeemer, he muttered between his teeth, ‘ I renounce it—I renounce it.’ ” \*

#### IX. *Cockburn.*

This murderer was executed for stabbing a man with a knife, in a fit of passion. The crime was committed at Falkirk ; and it is unnecessary to detail the particulars.

#### X. *Lingard.*

This criminal was tried at the assizes in Derbyshire for the murder of a woman who resided by herself at the toll-bar at Wardlaw Myres, in the parish of Tideswell, in that county. The murderer was discovered, by circumstantial evidence, in a singular manner. He had, it appears, after committing the murder, taken all the money he could collect in the toll-house, and with it a pair of shoes that had belonged to the deceased. When the report of the murder disturbed the neighbourhood, the fact of his possessing the shoes excited suspicion, and ultimately led to his apprehension. He at first strenuously denied all participation in the crime, but subsequently confessed himself to have been guilty. His confession states, that having frequently cohabited with the murdered woman, she on one occasion declared that she would “swear her life against him,” on which he

\* Constable’s Scots Magazine, 1821, p. 582.



“took the determination to kill her, and immediately seized her by the neck, and held her for about ten minutes until she lay still, and he thought she was dead. He then left loose of her; but, to prevent the possibility of her recovering, tied a pocket handkerchief, which she had round her head when he went in, but which had come off in the struggle, tight round her neck.”\* This murder, it will be observed, was committed in a fit of passion, and in self-defence.

### XI. *Pepe.*

This murderer was a Spaniard, and one of the atrocious leaders of a band of pirates, in the West Indies. A brief account of the atrocities of Pepe may be gathered from a report in the *Phrenological Journal*.† He was one of the four pirates who murdered the crew on board the *Crawford*, a vessel which, loaded with a cargo of American produce, sailed from Providence, Rhode Island, and was bound for Mantaza, in the Island of Cuba. The pirates, it is stated, first endeavoured to poison the crew, but failing in this attempt, resolved to have recourse to more desperate means. They armed themselves accordingly for the bloody tragedy; and, in the dead of night, having alarmed the crew by screaming frightfully in various parts of the vessel, every individual, as he came on deck, either from the fore-castle or cabin, was stabbed. The skull of Pepe was brought over to this

\* Confession of Anthony Lingard, dictated in the presence of one of his Majesty's Justices of Peace in the county of Derbyshire.

† Vol. v. p. 365.

country by Captain Graham, and presented to the Edinburgh Anatomical Museum by his brother, the distinguished Professor of Botany in this University.

## XII. *Macmillan.*

This man was executed in Ayr, for the murder of a woman, to whom, during the time of pregnancy, he administered some drug for the purpose of producing abortion. As he probably was guilty of this crime without any intention of killing her, it is unnecessary to enter into the details of the evidence adduced on the trial.

## XIII. *Mortimur Collins.*

This murderer was executed in Glasgow, for stabbing the keeper of Bridewell. He was a determined villain, and states in his confession, that, notwithstanding he had been indicted before the Sheriff Court, and committed to prison, for beating an old man in a most barbarous manner, on his liberation he again resumed his abandoned course of life.\* He was unanimously found guilty.

## XIV. *Clydesdale.*

This murderer, who had been a collier at Laigh Drumgulloch, in the parish of New Kirkland, was

\* The last Speech, Confession, and Dying Declaration of Mortimur Collins, soldier in the 37th Regiment of foot, who was executed at Glasgow on Wednesday, the 7th day of November, 1792, and his body given to the Doctors, for the murder of John Panton, keeper of Bridewell.—Printed by Galbraith.



convicted of "wickedly and maliciously assaulting Alexander Love, an old man, and inflicting on his head, and other parts of his body, many severe blows with a coal pick, in consequence of which he died soon after." Throughout the trial, it is stated that he conducted himself with the most brutal indifference, and heard the verdict from the Jury, and the pathetic address of the Judge, without the slightest emotion. During the course of the trial it came out, on the cross-examination of one of the witnesses, that when Clydesdale returned home after committing the fatal act, he seized a cat that was in the room, dashed it against the floor, and put it on the fire. The relation of this piece of cruelty excited a sensation of horror through the Court.\*

#### XV. *M'Kean.*

This murderer was executed in Glasgow. He was a notorious and atrocious villain, who, from the earliest period of his life, was addicted to every species of vice. He finally consummated his career of crime by murdering a man named Buchanan, the Lanark carrier. When under sentence of death, he wrote, like Haggart, a narrative of his past life, which contains, like all documents of a similar kind, much hypocritical and whining cant. Rochefoucault, in his *Maxims*, remarks, that "Criminals sometimes, at their execution, affect a constancy and contempt of death, which is in fact nothing more than the fear

\* Constable's Scots Magazine, October 1818, p. 378.

of facing it. Their constancy and contempt may be said to be to the mind, what the cap is to the eyes." There may be much truth in this observation; but it more frequently happens, that the most unprincipled and abandoned villains, finding their career of guilt drawing to a close, and a certain and ignominious death awaiting them, suddenly assume an air of piety and devotional cant, which are mere ebullitions of temporary fear, and little indicative of their real dispositions; for were their dungeon doors thrown open, and their liberty restored to them, there is every probability, as experience has repeatedly proved, that they would again engage in the same crimes with which they have been familiar from youth. The characters of such miscreants are not to be judged of by their dying speeches, confessions, and declarations, but by the conduct they have exhibited during the general tenor of their lives; and it is well known, that M'Kean was a treacherous, cruel, and abandoned culprit.

#### XVI. *Buchanan.*

This murderer was executed in Glasgow. On his trial it appeared, that the woman he murdered had excited his ill-will, by giving evidence against a girl who had stolen a shawl, and who was a favourite of his. He accordingly called at a house which he knew she frequented, and having enticed her into a closet with him alone, beat her in a brutal manner, and kicked her violently several times in the abdomen, in consequence of which she died a short time afterwards, in excruciating agony. The Jury, it is stated, "found



the prisoner guilty by a plurality of voices, and he heard the verdict and sentence with utter indifference."\*

#### XVII. *Kerr.*

This murderer was executed in Greenock for killing his wife, by beating her to death. One of the witnesses, on the trial, deponed, that "he looked in at the window, and saw Kerr's wife lying on the floor, and Kerr standing over her with a stick in his hand beating her."† The poor woman was at that time already dead. The cranium of this criminal being an injected arterial preparation, I could not, without spoiling it, obtain, according to the usual method, its capacity.

#### XVIII. *Divan.*

This murderer was executed in Glasgow for cutting his wife's throat. On the morning of the murder, pretending that he wished to shave himself, he made the unfortunate woman borrow the razor with which he perpetrated the deed. A boy who was one of the witnesses on the trial, stated, that "while he was playing with a ball in the same close in which Divan's family lived, his ball having run near the prisoner's house, he went in search of it, and happening to look in at the window, saw Mrs Divan sitting

\* Constable's Scots Magazine for October 1819, p. 372.

† Report of the Justiciary Trials in the Glasgow Chronicle for 1827.

on a stool, and the prisoner came behind her, and deliberately cut her throat, so as almost to sever her head from her body."\* The murderer, it appeared, then carried the bleeding corpse to the bed, where it was shortly afterwards discovered by her own children; and he deliberately changed his clothes to escape detection.

The most zealous Phrenologists must be constrained to admit, that measurements from the crania of these murderers will constitute a very extensive and complete induction. I shall proceed, therefore, to enquire, whether there be any truth in the assumption, that murderers possess always a large organ of Destructiveness; and shall compare the measurement of this organ in the cranium of each murderer, with the average measurement of the same, in my general Table of adult male crania.

I shall give, first, its *absolute*—secondly, its *relative* size.

The *absolute* size of the organ of Destructiveness, or the distance from Destructiveness to Destructiveness, measures on the skull of

Haggart,	.	5.2	inches,	which is <i>below</i> the average.
Scott,	.	5.3	.	which is <i>below</i> the average.
Anderson,	.	5.2	.	which is <i>below</i> the average.
Glen,	.	5.4	.	which is <i>below</i> the average.
Balfour,	.	5.45	.	which is <i>below</i> the average.
Gordon,	.	5.3	.	which is <i>below</i> the average.
Cockburn,	.	5.4	.	which is <i>below</i> the average.

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\* See Report of Justiciary Trials in the Glasgow Chronicle for 1824.



Lingard,	.	4.95	inches, which is <i>below</i> the average.
Pepe,	.	4.8	. . which is <i>below</i> the average.
Macmillan,	.	5.3	. . which is <i>below</i> the average.
Mortimur Collins,	.	5.35	. . which is <i>below</i> the average.
Clydesdale,	.	5.2	. . which is <i>below</i> the average.
M'Kean,	.	5.4	. . which is <i>below</i> the average.
Buchanan,	.	5.3	. . which is <i>below</i> the average.
Kerr,	.	5.5	. . which is <i>below</i> the average.
Divan,	.	5	. . which is <i>below</i> the average.

Not only is the organ of Destructiveness in the crania of these murderers, in its absolute size, below the average of the same organ in the crania collected by Dr Spurzheim, the measurements of which I have included in my general Table, and referred to, as a standard of comparison ;—but it is also below the average size of the same organ in the extensive series of crania collected by Sir William Hamilton, which, as I before observed, were principally British specimens.

Phrenologists will in vain attempt to argue, that the measurement of this organ does not give its size ; for if it be maintained, as it always hitherto has been, that its size is constituted by a greater or lesser degree of cerebral development, indicated by a corresponding breadth of the cranium, or by a protuberance immediately over each meatus ; then the measurement of any series of crania in this direction, cannot fail to give an accurate report of the several comparative sizes of this organ, as its greater or lesser development must always co-exist with a corresponding breadth, or narrowness of the cranium.

I next proceed to give the relative size of this or-

gan, or the proportion which it bears to the rest of the encephalon; and here I may remark, that the method of ascertaining the weight of the encephalon, by filling the cranium with sand, and reducing the specific gravity of the sand to the specific gravity of the brain, has given in this induction a result which corresponds, as nearly as could have been anticipated, with the observations of the Wenzels, who give the weight of the whole brain

At 18 years of age, as 20940 *grains*.

At 22 . . . . 21820 do.

At 25 . . . . 22200 do.

At 31 . . . . 24120 do.

At 46 . . . . 20490 do.\*

The average weight of the encephala of fifteen criminals, executed at various ages, but generally nearer to the latter period of life, is given in my table of murderers at 20605 *grains*.

The relative size of the organ of Destructiveness, or its proportion to the encephalon, compared with the average proportion of the same organ in my general Table of adult male crania, is

In Haggart, . as 1 to 4264.807, which is *below* the average.

In Scott, . as 1 to 3546.415, which is *above* the average.

In Anderson, . as 1 to 3943.653, which is *below* the average.

In Glen, . as 1 to 4065.370, which is *below* the average.

In Balfour, . as 1 to 3927.706, which is *below* the average.

In Gordon, . as 1 to 3736.037, which is *below* the average.

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\* De Penitiori Structura Cerebri. Tab. iii.



In Cockburn, . . as 1 to 3659.259, which is nearly the same,  
but rather *below* the average.  
In Lingard, . . as 1 to 3287.676, which is *above* the average.  
In Pepe, . . as 1 to 4047.708, which is *below* the average.  
In Macmillan, . . as 1 to 3696.037, which is nearly the same,  
but rather *below* the average.  
In Mortimur Collins, as 1 to 4508.598, which is *below* the average.  
In Clydesdale, . . as 1 to 4218.076, which is *below* the average.  
In M'Kean, . . as 1 to 3702.777, which is *below* the average.  
In Divan, . . as 1 to 4568, which is *below* the average.

Accordingly, of the fifteen crania in which the weight of the encephalon could be ascertained, thirteen possess the organ of Destructiveness, even in proportion to the general size of the brain, *below* the average.

The murderers to whose crania I now refer, were most abandoned and atrocious characters; and the outrages for which they severally were convicted, are among the most frightful that have been recorded in the annals of crime. The murders, in particular, committed by Anderson, Glen, Gordon, and Buchanan, were unprovoked by any aggression on the part of their unhappy victims, and prompted only by that infernal spirit of cruelty, which triumphs in the infliction of pain, and heeds not how many human lives are sacrificed in its appalling career.

In the case of Clydesdale, it is a notorious fact, that after beating to death, without any apparent motive, an inoffensive old man, he returned home, and with fiendish exultation swore, tossing up a halfpenny at the same time, that as the coin "came down either a head or tail," he would murder either his own wife

or the cat that was in the room. The latter happened to return, and the wretch seized the poor animal immediately ; and, as I have before stated, having dashed it against the floor, placed it on the blazing fire. The case of the pirate Pepe is also remarkable. One witness states, that, during the scene of carnage on board the Crawford, he saw Pepe standing against the forecastle of the vessel with a knife in his hand. As he approached him, Pepe assumed the attitude of striking, and on turning to avoid the blow, he received a stab in the shoulder. Hastening across the deck, he perceived a man, whom he supposed to be the captain, leaning against the side, and moaning piteously. As he recognised him, the sufferer enquired if they could get nothing to defend themselves with. Witness seized a handspike, which was taken possession of by Potter ; and as he was going aloft, the blood of his fellow-sufferers descended in a shower on his head, and inspired him with such horror that he was incapable of advancing. This terrific scene took place a little after midnight, on a bright starlight night. When day at length began to dawn, the same witness saw Pepe, and Courro, another of the pirates, come on board with two muskets, which they loaded in his sight. He then saw them advance from the forecastle, and call up some one from below, whom he recognised to be Aza Bicknell, one of the unfortunate passengers. This poor fellow seemed wounded and writhing with agony : a bandage surrounded his body. He was then either ordered to throw, or threw himself overboard ; and, in the act of falling,



was shot at by Courro, whether with or without effect he could not tell ; but when in the water, Pepe discharged his piece at him, and from the shriek that followed as the poor fellow sank, he supposed it took effect. Another witness states, that he saw Pepe leaning over a man who had fallen, and having exclaimed, "*Ah ! not yet dead !*" beat the body in a brutal manner, and threw it overboard. After the bloody tragedy was completed, it is stated in the report, that they strided across the deck, exulting in their victory, and resembling demons rather than men. Each contended for the honour of having perpetrated the greatest number of murders. It is further added, that Pepe confessed the first murder he committed was on a fellow-classmate at school, when he was only *fourteen* years of age, and he could not recollect how many he had since perpetrated.

The secretary of the Phrenological Society at Washington transmitted to this country the report whence these particulars have been extracted, and, at the same time, the measurement of the skull. I am under the necessity of stating, that the latter is very inaccurate. I do not pretend to know what sort of callipers are used in America, or whether the elsewhere immutable principles of mathematical science may there bow down before the genius of Phrenological superstition ; but of this I am satisfied, that the organ of Destructiveness has here been represented more than half an inch larger than it actually measures. The dimension of it, as given in the Phrenological Journal, is *5.4 inches*, which, be it observed, is

at any rate *below* the average ; but the correct measurement is only 4.8 ; and I defy any person, using the callipers honestly, to make so considerable a difference. My attention was directed to this skull by Sir William Hamilton, who first noticed that its remarkable narrowness from Destructiveness to Destructiveness constitutes its characteristic peculiarity ; and he informs me, that among the number of crania he has examined, he has never met with one so narrow in this dimension. Here, therefore, is the skull of a cold-blooded and execrable murderer, not only failing to possess a large organ of Destructiveness, but possessing it, according to *any* standard, absolutely and relatively below the average. So triumphant a case is this against the Phrenological *hypothesis*, that I venture, with confidence, to challenge the Phrenologists to produce any cranium of the same size, that measures so narrow from Destructiveness to Destructiveness, as does the skull of this atrocious and bloody murderer.

In my Table of murderers, and in the Table of adult male crania, I have also given measurements of the organs of Secretiveness, Acquisitiveness, and Combaticiveness, the manifestations attributed to which very frequently form characteristic features of murderers. M'Kean, for example, was at an early period of life addicted to thieving ;—his organ of Acquisitiveness is *below* the average. Haggart was by “habit and repute” a thief ;—his Acquisitiveness is *below* the average. Scott, Mortimur Collins, and Haggart, were notoriously quarrelsome, and of dispositions given



to Combativeness;—each possesses the organ of Combativeness *below* the average.

I now proceed to consider the second condition which is supposed by [Phrenologists to characterise the crania of murderers—*viz.* the deficiency of the alleged organs of the moral sentiments.

I propose estimating the development of these by measuring, as the Phrenologists direct, the organ of Benevolence, and that of Conscientiousness, from the meatus. This measurement gives the distance of the expansion, or the length of the development, which is the first and principal condition of the size of every Phrenological organ. The breadth or periphery of each is, on the other hand, capable of no demonstration, inasmuch as the circumscribed boundaries of each organ are purely ideal, and the exact limits ascribed to each depend, in every instance, on the fancy of the manipulator. The absolute size of the organ of Benevolence, estimated by measuring from the meatus to its centre, is in

The murderer Haggart,	5.15	inches,	which is <i>above</i> the average.
. . . Anderson,	5.05	. . .	which is nearly the <i>same</i> as the average.
. . . Glen,	5.05	. . .	which is nearly the <i>same</i> as the average.
. . . Balfour,	5.2	. . .	which is <i>above</i> the average.
. . . Cockburn,	5.2	. . .	which is <i>above</i> the average.
. . . Macmillan,	5.2	. . .	which is <i>above</i> the average.
. . . Collins,	5.25	. . .	which is <i>above</i> the average.
. . . Clydesdale,	5.2	. . .	which is <i>above</i> the average.
. . . M'Kean,	5.1	. . .	which is <i>above</i> the average.
. . . Buchanan,	5.1	. . .	which is <i>above</i> the average.

The murderer Kerr, 5.4 inches, which is *above* the average.  
 . . . Divan, 5.2 . . . which is *above* the average.

Four only of the seventeen murderers possess the organ of Benevolence in its absolute size *below* the standard of comparison ; and in these exceptions, the general capacity of each cranium, it should be observed, is remarkably small.

The organ of Benevolence, even in proportion to the size of the encephalon, is in the murderer Scott *above* the average ; Anderson, *above* the average ; Gordon, who murdered the pedlar boy, *above* the average ; also in Cockburn, *above* the average ; in Lingard, *above* the average ; in the atrocious Pepe, *above* the average ; in Macmillan, *above* the average ; in M'Kean, *above* the average.

Here it may be observed, that the anti-Phrenological evidence, in these cases, does not rest on the circumstance of these murderers possessing an organ of Benevolence, because every individual is supposed to have all the organs ; but it rests on the incontrovertible fact of their possessing it, both in absolute and relative size, *above* the ordinary standard. A large development of Benevolence, on the skulls of such atrocious monsters as Pepe, Gordon, Scott, &c. is as irreconcilable with their characters, as the profession of the most heavenly virtue is opposed to the perpetration of the most damning iniquities.

The organ of Conscientiousness next claims consideration ; and in its absolute size, estimated by measurement from the meatus to its centre, is



In Haggart, . . .	4.4 inches,	which is nearly the <i>same</i> as the average.
In Anderson, . . .	4.5 . . .	which is <i>above</i> the average.
In Gordon, . . .	4.4 . . .	which is nearly the <i>same</i> as the average.
In Macmillan, . . .	4.6 . . .	which is <i>above</i> the average.
In Mortimur Collins, . . .	4.6 . . .	which is <i>above</i> the average.
In Clydesdale, . . .	4.75 . . .	which is <i>above</i> the average.
In M'Kean, . . .	4.4 . . .	which is nearly the <i>same</i> as the average.
In Buchanan, . . .	4.4 . . .	which is nearly the <i>same</i> as the average.
In Kerr, . . .	4.9 . . .	which is <i>above</i> the average.
In Divan, . . .	4.5 . . .	which is <i>above</i> the average.

Anderson, Gordon, Lingard, Macmillan, and M'Kean, possess the organ of Conscientiousness, even in proportion to encephalon, *above* the average.

Lastly, I proceed to consider the third condition which is presumed to characterise the crania of murderers—*viz.* the alleged deficiency of the anterior cerebral development. This may fairly be judged of by two measurements; *first*, the distance from the meatus to Lower Individuality, which the Phrenologists themselves commonly take; *second*, the distance from the meatus to Causality, which, being situated higher in the forehead, gives a better idea of the comparative proportion of the anterior development.

The quantity of brain before the ear, estimated by its length, and judged of by these dimensions, is

In Haggart, *above* the average.

In Glen, *above* the average.

In Balfour, *above* the average.

In Gordon, *above* the average.

In Cockburn, *above* the average.

In Pepe, *above* the average.

In Macmillan, *above* the average.

In Mortimur Collins, *above* the average.

In M'Kean, *above* the average.

In Buchanan, *above* the average.

In Kerr, *above* the average.

The anterior development in the skull of Burke is also fully proportioned to the general size of the skull. I have, on this subject, satisfied myself by a still more conclusive method of estimating the comparative quantities of brain before the ear. I have measured from meatus to meatus, with a piece of string, passing it through the centre of the organs of Comparison and Causality, and found decidedly, that the crania of murderers exhibit no remarkable deficiency of brain before the ear, or preponderance of development in the region to which the animal propensities are referred.

In further confirmation of the several positions I have maintained, I proceed to give the measurements of the cranium of the late celebrated Dr David Gregory, who was Professor of Mathematics in the University of Edinburgh, and subsequently appointed Savilian Professor of Astronomy in Oxford. He was the distinguished friend and companion of Sir Isaac Newton; he was the learned author of several valuable works on mathematical science; and a man of high moral and intellectual virtue. He died on his way



from Oxford to London, in Berkshire; and the skull is authenticated by the circumstance of its having been taken from the place of interment by a gentleman, who transmitted it to a distinguished individual in this city, who has it still in his possession.

The capacity of this cranium, or the weight of its encephalon, is 21776 *grains*.

From Destructiveness to Destructiveness, is 5.7 *inches*; and its proportion to the encephalon as 1 to 3820.350.

The organ of Destructiveness in the learned Professor is, in its *absolute* size, larger than the same organ in every murderer included in my induction; and, even in proportion to the general size of the brain, larger than the same in Burke, Haggart, Anderson, Glen, Balfour, Pepe, Mortimur Collins, Clydesdale, and Divan.

The organ of Combativeness in the Professor measures 5.6 *inches*, which is larger than the same organ in every murderer.

His organ of Acquisitiveness is 4.95 *inches*; Balfour has it the same; and every other murderer has it *less*, including even the thieves Gordon, M'Kean, and Haggart.

His organ of Secretiveness is 5.7 *inches*, which is larger than the same in each of the murderers.

Let us now look to the organs of the moral sentiments;—the organ of Benevolence, on the cranium of Dr David Gregory, measures 5.1 *inches*—its proportion to the encephalon is as 1 to 4269.803.

Burke has this organ in its absolute size, the *same*

as the celebrated Professor. Glen and Anderson have it *nearly the same*. M'Kean and Buchanan have it the *same*. Balfour, Cockburn, Macmillan, Mortimur Collins, Clydesdale, Kerr, and Divan, all atrocious miscreants, have it *larger*.

Even in proportion to the size of the encephalon, Burke, Scott, Anderson, Balfour, Gordon, Cockburn, Lingard, Pepe, Macmillan, Clydesdale, and M'Kean, have each a *larger* organ of Benevolence than the learned and virtuous Professor.

The organ of Conscientiousness, on the skull of Dr David Gregory, measures 4.7 *inches*. Its proportion to the encephalon is as 1 to 4633.191.

Clydesdale and Kerr have this organ in its absolute size *larger*; and in proportion to the encephalon, Burke, Anderson, Gordon, Lingard, Pepe, Mortimur Collins, Clydesdale, and M'Kean, have each the organ of Conscientiousness *larger* than the Professor.

Let us now proceed to the intellectual organs, remembering, at the same time, the justly distinguished character of Dr David Gregory.

The distance from the meatus to Comparison, measures, on his cranium, 5 *inches*; the same organ is,

In Haggart,	4.9 <i>inches</i> ,	<i>nearly the same</i> as the Professor's.
In Anderson,	4.9 . . .	<i>nearly the same</i> .
In Glen,	. . . 5 . . .	the <i>same</i> .
In Pepe,	. . . 5 . . .	the <i>same</i> .
In Balfour,	. . . 5 . . .	the <i>same</i> .
In Macmillan,	4.9 . . .	<i>nearly the same</i> .
In Collins,	. . . 5.2 . . .	<i>larger</i> .



In M'Kean, . 5 . . . the *same*.  
 In Buchanan, 5.1 . . . *larger* than the Professor's.  
 In Kerr, . . 5.2 . . . *larger*.

The organ of Causality, to which the power of tracing the relations of cause and effect, and of reasoning closely, is referred, measures, in Dr David Gregory, from the meatus to the Causality on the *opposite* side of the skull, 5.1 *inches*.

By taking this measurement, an accurate report is also given of the general anterior cerebral development.

The organ of Causality, or quantity of brain before the ear, thus estimated, measures,

In Haggart,	. . .	5.25 <i>inches</i> , which is <i>larger</i> than the Professor's.
In Scott,	. . .	5.2 . . . which is also <i>larger</i> .
In Anderson,	. . .	5.3 . . . which is also <i>larger</i> .
In Glen,	. . .	5.35 . . . which is also <i>larger</i> .
In Balfour,	. . .	5.4 . . . which is also <i>larger</i> .
In Macmillan,	. . .	5.2 . . . which is also <i>larger</i> .
In Mortimur Collins,	. . .	5.5 . . . which is also <i>larger</i> .
In Clydesdale,	. . .	5.3 . . . which is also <i>larger</i> .
In M'Kean,	. . .	5.4 . . . which is also <i>larger</i> .
In Buchanan,	. . .	5.3 . . . which is also <i>larger</i> .
In Kerr,	. . .	5.7 . . . which is also <i>larger</i> .

Hence these criminals prove to have had each a greater quantity of brain before the ear, than the distinguished Professor of Astronomy.

From the meatus to the occipital spine, which may be taken as a criterion of the posterior cerebral development ; or the quantity of brain behind the ear,

to which region the animal propensities are ascribed, measures on the cranium of Dr David Gregory 4.35.

On the skull of Haggart,	.	4.05 inches,	which is less than the Professor's.
.	.	Scott,	4.05 . . which is less.
.	.	Glen,	4.3 . . which is less.
.	.	Anderson,	4.05 . . which is less.
,	.	Pepe,	3.6 . . which is less.
.	.	Balfour,	3.7 . . which is less.
.	.	Gordon,	3.5 . . which is less.
.	.	Lingard,	3.75 . . which is less.
.	.	Mackmillan,	3.8 . . which is less.
.	.	Mortimur Collins,	3.8 . . which is less.
.	.	Clydesdale,	3.7 . . which is less.
.	.	M'Kean,	3.7 . . which is less.
.	.	Buchanan,	3.5 . . which is less.
.	.	Kerr,	4 . . which is less.
.	.	Divan,	3.9 . . which is less.

Hence, in direct opposition to the Phrenological assumption, the philosopher proves to have the larger posterior development; and the murderers to have the organs of the animal propensities consequently *less* than the individual of high moral and intellectual attainment.

The counter Phrenological propositions deduced from the present induction, are,

*First*, The most atrocious murderers not only fail to possess a large endowment of the alleged organ of Destructiveness, but have it, very frequently, both *absolutely* and *relatively* below the average size.

*Second*, The most cruel and horrid murderers fre-



quently possess a high development of the pretended organs of the moral sentiments, particularly those of Benevolence and Conscientiousness.

*Third*, Murderers do not possess a less development of the supposed intellectual organs, nor a greater development of those to which the animal propensities are referred, than individuals of high intellectual and moral character.

Here I may observe, that the first ten murderers in my Table constitute a part of Sir William Hamilton's induction, he having, in addition to his general Table of European male crania and the males of Spurzheim, allowed me to take extracts of measurements from his Table of executed murderers.

For the use of the other crania, the measurements of which I have presented in my Table, I am indebted to Dr Jeffray, the learned professor of Anatomy in the University of Glasgow. I am also obliged to the Royal Physical Society of Edinburgh, for the use of the skull of Lingard, who was executed in Derbyshire.

Sir William Hamilton, I may add, after instituting a fair enquiry into this subject some months ago, came to conclusions similar to those which I have above stated. Taking the skulls of *all* the murderers preserved in the different musea of this University, amounting to above a dozen, as constituting at once a *large* and an *unselected* series, he had ascertained that, whether compared with any general average, or with the heads of individuals remarkable for their moral and intel-

lectual virtues, there was nothing to warrant the doctrine of the Phrenologists, that such criminals are distinguished from other persons by any excess of the pretended organs of Destructiveness, and of those of the animal propensities in general, or by any deficiency in those dimensions which express the Phrenological development of the intellectual and moral powers ; and on this induction he has established one of the propositions in his forthcoming work, “ *The Fictions of Phrenology, and the Facts of Nature.*”

## IV.

*Do the most notorious thieves possess the organ of Acquisitiveness larger, or that of Conscientiousness smaller, than Individuals of exemplary character ?*

To determine this question, I shall briefly state to the Society, that I have taken measurements of the organs of Acquisitiveness and Conscientiousness, and at the same time, the general size of the head, in an unselected class of individuals, English, Scotch, and Irish, and compared these with similar measurements from the heads of all the most notorious thieves in the Edinburgh Jail and Bridewell.

The number of these convicted thieves proved to be 22 ; and of these, 20 are Scotchmen. The average absolute size of the organ of Acquisitiveness in them, is 5.525. The average absolute size of their organ of Conscientiousness, 4.806 *inches*.

On referring to my Table of Englishmen, (28 in



number,) 14 have the organ of Acquisitiveness, in its absolute size, *above* the average; and 12 that of Conscientiousness *below* the average of these organs, in the 22 thieves.

On referring to my Table of Scotchmen, (25 in number,) 16 have the organ of Acquisitiveness, in its absolute size, *above*; and 11 that of Conscientiousness *below* the average of the same, in the thieves.

On referring to the Table of Irishmen, (27 in number,) 14 have the organ of Acquisitiveness, in its absolute size, *above*; and 16 that of Conscientiousness *below* the average of the same organs in the thieves.

Accordingly, of the 80 respectable individuals taken without any selection, 44 have the organ of Acquisitiveness, in its absolute size, *above* the average; and 39 that of Conscientiousness, in its absolute size, *below* the average of the same organs in the above unselected number of notorious and convicted thieves.

Our inability to ascertain accurately its depth, cannot fail to oppose an almost insuperable difficulty to every attempt, to determine accurately the size of the living head. The method to which hatters have recourse, and which gives only its average length and breadth, is, I am aware, in many respects very imperfect, yet the only one of which even Phrenologists can avail themselves. In the case of Hare, I have given the proportions of the several organs to these dimensions, and shall, in the present comparison, adopt the same plan. I shall not, therefore, here enter into any discussion on the general doctrine of proportions. Many will, I am satisfied, consider it

sufficient to prove, that from a large class of individuals taken without any selection, the average *absolute* size of an alleged organ, is found not to co-exist with the disposition it is supposed to characterise.

Desirous, however, of rendering my induction as complete as possible, I have given not only the *absolute*, but also the *relative*, sizes of the several organs, or their proportions to the dimensions of the head, as far as during life the latter can be determined.

The average relative size of the organ of Acquisitiveness, or its average proportion to the size of the head, in the 22 thieves, is as 1 to 2.421 ; that of Conscientiousness, as 1 to 2.787.

On referring to the Tables, it will be seen, that of the 28 Englishmen, 11 possess the organ of Acquisitiveness *above*, 16 that of Conscientiousness, in proportion to the size of the head, *below*, the average of the same in the 22 thieves.

Of the 25 Scotchmen, 13 have the organ of Acquisitiveness *above*, 16 that of Conscientiousness, in proportion to the size of the head, *below* the average of the same organs in the thieves.

Of the 27 Irishmen, 7 have the organ of Acquisitiveness *above*, and no fewer than 22 that of Conscientiousness, even in proportion to the size of the head, *below*, the average of the same in the thieves.

The counter Phrenological proposition deduced from this induction, is,

The organ of Acquisitiveness is often absolutely and relatively *less*, and that of Conscientiousness absolutely and relatively *larger*, in the most no-



torious thieves, than in individuals of exemplary character.

The only comment I should conceive it necessary to make on these deductions, is sufficiently expressed by Mr Combe, who, in speaking of the truth or falsehood of Phrenology, remarks : " If two individuals were found to possess a larger development of Acquisitiveness ; but if in the one Conscientiousness was very large, and in the other very small, and we were told that the one was a thief, and the other an honest man, how complete would the refutation be, if the one possessing the larger Conscientiousness were found to be the rogue."\*

The facts that constitute the present induction were, I may repeat, taken without selection ;—in living individuals, I took the measurements of the first who presented themselves, and with the several crania adopted the same plan ; nor have I in a single instance rejected the measurement of a person or cranium, because it did not appear to accord with anti-Phrenological evidence. I have always supposed, and am confirmed in the opinion, that practical Phrenology is dependent entirely on accidental contingencies ; and when it is considered that we are referred to thirty-five cranial prominences, which are the common conditions of every head, and to as many faculties which are the common attributes of every mind, it may easily be understood, why the alleged characteristic configurations will *occasionally* correspond with the manifestations attributed to them, and why

\* Phrenological Transactions, p. 323.

as frequently a diametrically opposite relation will be found to exist.\*

It remains for me only to state, that I have taken every care to ensure the accuracy of my measurements, which have always been taken in the presence of impartial persons, many of whom will testify, that so completely has this investigation been conducted on experimental principles, that I did not, and could not, until the whole had been concluded, anticipate the result of my induction. Among other gentlemen, I have in particular to thank Mr Deseret, who is a professed Phrenologist, and a member of the Phrenological Society of Edinburgh, for having occasionally superintended my measurements. Also Mr Holroyd, my fellow-President in this Institution, who has very frequently acted as an impartial umpire on such occasions.

These gentlemen will, I believe, bear testimony to the general accuracy of my measurements;† and should

\* The whole doctrine of Phrenological chances is ably stated by Dr Milligan, in the *Appendix* to his translation of Majendie's Physiology.

† The communications I have received on this subject, I think it proper, with the consent of the writers, to subjoin.

“ MY DEAR SIR,

“ I have much pleasure in authorizing you to state, that *those* measurements which I have seen you take, have always appeared to me to have been taken accurately. I re-measured, as you are aware, the heads of a number of thieves in the Edinburgh Jail and Bridewell, which you had previously taken, and found that your measurements so far corresponded with mine, that I can have no hesitation in acknowledging my reliance on the ge-



any person, resuming the same experiments, find any difference in his measurement and my report, the variation is to be attributed rather to the inadequate means which Phrenologists have given us of ascertaining any definite knowledge of their *soi-disant Science*, than to any desire on my part either to "extenuate aught, or set down aught in malice."

Formerly it was maintained, that the production of a single anti-Phrenological fact would be sufficient to overturn the whole theory; but I am satisfied that, if Phrenologists would only, as Dr Spurzheim terms it, "*go into nature*;"—if they would have recourse to an *unselected* series of measurements, or manipulations, they would at once discover that their system is no more than the "baseless fabric of a vision," and as false as any other superstition that

neral correctness of your measurements, although, as a Phrenologist, *I do not agree with your deductions, for reasons which, within the limits of a note, I cannot state.*

"It is also due to you to state, that I regret, from the nature of my professional engagements, I have not been able to witness *all* your measurements, which you have *frequently* invited me to superintend. I remain, yours truly,

"*Edin. April 17, 1829.*"

PHINEAS DESERET.

"DEAR SIR,

"I have much pleasure in stating, that during the time I attended the measurements which you have taken, I can vouch for their correctness, whatever may be the deduction that may be drawn from your investigation. Some of your measurements I myself repeated, and found them correspond with your report. I am, truly yours,

"A. T. HOLROYD.

"*Edinburgh, April 16, 1829.*"

has ever been imposed on the ignorance and credulity of mankind.

The Public is aware of the fair pretensions which the Phrenologists have invariably held forth ; yet, what has been the line of policy they have adopted ? They have pretended to establish a system of philosophy founded exclusively on facts, and yet have never had recourse to any fair, or candid *experimentum crucis* by which the truth or falsehood of their primary propositions might be determined ;—they have adduced only *ex parte* evidence, and this, on their own showing, is of the most unsatisfactory kind, inasmuch as they have never established any standard by which the proportions of the alleged organs can be determined ;—they have termed their organs, “ *moderate*,” “ *full*,” “ *large*,” “ *rather large*,” &c., and these terms, to the present day, have been used, without any rule or definite principle by which the application of them can be regulated ;—they, with an inconsistency, and yet a gravity, worthy of Hudibras in his metaphysical disquisitions, persist in seriously maintaining a science of *proportions* without a *scale of measurement* ;—they wander over the country, preaching their doctrines *ex cathedra*, as though they had really a foundation in truth ; whilst it is a notorious fact, of which they themselves must be aware, that there is not an eminent man of science in Europe who has become a convert to them ;—they profess to maintain, at all times, the principles of free and manly discussion ; and for this purpose have founded a society in this city, for the admission of believers, and do not allow



any stranger, who may visit it, to express an opinion ; —they profess that their doctrines are as well established, and as palpable to every enquirer, as the most demonstrable truths in nature, yet do not agree among themselves on the most preliminary points;—Dr Gall ridiculed the bumps of Dr Spurzheim, Dr Spurzheim rejects, with disdain, the callipers of Mr Combe ; and Mr Combe has been lately engaged in an open Phrenological warfare with one of the most intelligent of his contemporaries, on the subject of what is even the necessary result or tendency of their faith;\* —they give an organ one function to-day, another to-morrow ;—they maintain that a large organ of Veneration is, at one time, the characteristic configuration of the head of a saint—at another, equally essential to that of the most notorious and professed infidel !† Lastly, come the interminable combinations of their imaginary organs ; and thus the Phrenologists shift from argument to argument, from position to position, resembling the ghosts in Virgil's *Inferno* :

Huc illuc volitant, nec certa in sede morantur.

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\* See the controversy between Messrs Combe and Scott.

† See the report of the development of *Voltaire*, *Phrenological Journal*, vol. iii. p. 571.

## TABLES OF MEASUREMENTS.

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TABLE I.—MEASUREMENTS OF

References to the Crania.	Destructiveness to Destructiveness.	Secretiveness to Secretiveness.	Acquisitiveness to Acquisitiveness.	Combattiveness to Combattiveness.	Meatus to Benevolence.	Meatus to Conscientiousness.
II.	5.8	6	5.125	5.5	5.25	4.8
IV.	5.8	6.1	5.5	5.5	5.125	4.6
V.	6	6	5.2	5.2	5	4.7
VI.	5.7	5.6	5	5.3	4.8	4.6
VII.	5.6	5.6	4.7	5.2	4.9	4.7
VIII.	5.4	5.3	4.4	4.75	4.6	4.2
IX.	5.8	5.8	5	5	5	4.3
X.	5.5	5.7	5	5.3	5	4.5
XII.	5.5	5.375	4.7	4.7	4.8	4.2
XIII.	5.6	5.7	5	4.8	4.8	4.2
XIV.	5.6	5.6	5	4.8	5.1	4.5
XVI.	5.5	5.375	5.1	4.8	5	4.6
XVII.	5.6	5.6	4.6	5	4.8	4.1
XXI.	5.9	6	5.7	5.3	5.4	4.1
XXII.	5.25	5.3	4.7	4.8	4.8	4.5
XXIII.	5.4	5.5	4.6	4.8	5.25	4.4
XXV.	5.8	5.9	5.3	5.1	5.3	4.5
XXVI.	5.5	5.4	4.5	4.8	4.7	4.1
XXVII.	5.7	5.8	5.4	5.3	5.1	4.6
XXVIII.	5.5	5.5	4.9	5.3	5.1	4.8
XXIX.	5.8	5.8	4.9	5.2	5	4.3
XXX.	5.25	5.3	4.6	4.6	5.3	4.6
XXXIII.	5.6	5.6	4.9	5.1	5	4.3
XXXIV.	5.5	5.5	4.6	5.1	5.1	4.6
XXXV.	5.5	5.5	4.9	5	4.9	4.4
XXXVI.	5.7	5.9	4.9	5	5.3	4.9
XXXVII.	5.7	5.9	5.1	5.1	5.1	4.2
XXXIX.	5.5	5.5	4.7	4.9	4.9	4.45
XLI.	5.6	5.6	5	5	5.1	4.6
XLII.	5.6	5.6	5	5	5.2	4.7
XLIII.	5.8	5.7	5.1	5	4.9	4.6
XLIV.	5.7	5.9	5.1	5.1	5.1	4.6
XLV.	5.9	5.8	5.2	5.1	5	4.1
XLVII.	5.5	5.5	4.7	5	4.8	4.5
XLVIII.	5.4	5.4	4.9	5.3	5.1	4.35
XLIX.	5.1	5	4.5	4.7	4.7	4.5
L.	5.8	5.9	5.15	5	5.1	4.4
Total . . .	207.40	208.55	182.675	186.45	185.425	165.10
Average .	5.6	5.636	4.937	5.039	5.011	4.462

## ADULT MALE CRANIA.

Meatus to Causality.	Meatus to lower Individuality.	Meatus to Philoprogenitiveness.	Weight of the Encephalon.	Proportion of Destructiveness to the Encephalon.	Proportion of Benevolence to the Encephalon.	Proportion of Conscientiousness to the Encephalon.
4.4	4.45	4.7	23069	1 : 3977.413	1 : 4394.095	1 : 4806.041
4.4	4.4	4.2	22005	1 : 3793.965	1 : 4293.658	1 : 4783.695
4.5	4.5	4.15	21011	1 : 3501.833	1 : 4202.200	1 : 4470.425
4.5	4.3	4.6	19772	1 : 3468.771	1 : 4119.166	1 : 4298.260
4.1	4.3	4.6	21077	1 : 3763.750	1 : 4301.428	1 : 4484.468
3.9	4	3.9	16632	1 : 3080.000	1 : 3615.652	1 : 3960.000
4.2	4.3	4.4	19296	1 : 3326.896	1 : 3859.200	1 : 4487.441
4.1	4.3	4.3	19543	1 : 3428.596	1 : 3908.600	1 : 4342.888
4.2	4.2	4.1	15893	1 : 2889.636	1 : 3311.041	1 : 3784.047
4.15	4.1	4.4	20571	1 : 3494.821	1 : 4285.625	1 : 4897.857
4.6	4.7	4.5	21412	1 : 3823.571	1 : 4198.431	1 : 4758.222
4.1	4.2	4.3	21406	1 : 3892.000	1 : 4281.200	1 : 4653.478
4	4.3	4.4	20871	1 : 3726.980	1 : 4348.125	1 : 5090.487
4.6	4.6	4.2	21923	1 : 3715.762	1 : 4059.814	1 : 5347.073
4.4	4.2	3.8	17633	1 : 3358.666	1 : 3673.541	1 : 3918.444
4.3	3.9	4.6	<i>broken</i>			
4.6	4.5	4.4	22693	1 : 3912.586	1 : 4281.698	1 : 5042.888
4.1	4.1	4	17209	1 : 3128.909	1 : 3661.489	1 : 4197.317
4.2	4.5	4.4	20865	1 : 3660.526	1 : 4091.176	1 : 4535.869
4.3	4.8	4.9	23581	1 : 4287.454	1 : 4623.725	1 : 4912.708
4.2	4.3	4.5	20371	1 : 3512.241	1 : 4074.200	1 : 4737.441
4.5	4.2	4.2	18608	1 : 3544.380	1 : 3510.943	1 : 4045.217
4.9	4.9	4.5	<i>broken</i>			
4.4	4.3	4.1	<i>broken</i>			
4.3	4.4	4.7	19290	1 : 3507.272	1 : 3936.734	1 : 4384.090
4.5	4.7	4.3	20906	1 : 3667.719	1 : 3944.528	1 : 4266.530
4.1	4.3	4	22005	1 : 3860.526	1 : 4314.705	1 : 5239.285
4.2	4.1	4	17232	1 : 3133.090	1 : 3516.734	1 : 3872.359
4.2	4.5	4.2	20065	1 : 3583.035	1 : 3934.313	1 : 4361.956
4.3	4.5	4.35	20941	1 : 3739.464	1 : 4027.115	1 : 4455.531
4.3	4.55	4.95	23487	1 : 4049.482	1 : 4793.265	1 : 5105.869
4.4	4.4	4.7	25109	1 : 4405.087	1 : 4923.333	1 : 5458.478
4.2	4.5	4.3	22005	1 : 3729.661	1 : 4401.200	1 : 5367.073
4.15	4.5	4.5	19866	1 : 3612.000	1 : 4138.750	1 : 4414.666
4.9	4.7	4.6	20524	1 : 3800.740	1 : 4024.313	1 : 4718.160
3.9	4	4.3	18467	1 : 3620.980	1 : 3929.148	1 : 4003.777
4.4	4.6	3.35	20689	1 : 3567.068	1 : 4056.666	1 : 4702.045
159.50	162.10	160.40	696027	123,564.880	139,035.811	155,904.085
4.31	4.381	4.335	20471	3634.261	4089.288	4585.414



TABLE II.—MEASUREMENTS OF THE HEADS

	Destruc- tiveness to Destruc- tiveness.	Acquisi- tiveness to Acquisi- tiveness.	Ear to Be- nevolence.	Ear to Con- scientious- ness.	Ear to Lower Individual- ity.
William Hodgson,	5.9	5.1	4.9	4.5	4.6
William Nash,	5.95	5.6	5.7	5.7	4.9
Henry Nicholls,	6.1	5.9	5.9	5.6	4.8
John Northover,	5.6	5.4	5.6	4.85	4.8
John Charles,	5.85	5.3	5.8	5.2	4.9
John Warren,	5.7	5.5	5.7	4.4	4.8
Charles Harford,	6.1	5.8	5.3	4.6	4.8
George Brindley,	5.95	5.8	5.4	4.6	4.9
Thomas Hill,	5.8	5.4	5.3	4.6	4.8
Charles Christison,	5.9	5.6	5.9	4.9	5.1
Henry Walker,	5.7	5.5	5.25	4.8	4.7
Joseph Hall,	6.1	5.8	5.25	4.5	5
George Cumberlidge,	5.95	5.4	5.1	4.5	4.8
John Smith,	6.	5.6	5.5	5.3	4.8
Richard Pilley,	6.2	5.8	5.6	4.6	4.6
William Read,	6	5.25	5.9	5.5	4.9
Thomas Clerk,	5.9	5.4	5.1	4.5	4.8
Nicholas Ruddock,	6.2	5.7	5.6	5	4.2
George Dickson,	5.95	5.8	5.4	4.9	4.9
James Dyson,	6.05	5.9	5.65	4.9	5.3
John Martin,	5.7	5.3	5.65	5.2	5.4
Charles Betts,	5.85	5.3	5.7	4.9	4.7
Richard Wright,	6.2	5.7	5.7	5.1	4.5
Samuel Clerk,	5.85	5.25	5.05	4.75	4.65
Edward Crick,	5.95	5.45	5.7	4.85	5
William Stanley,	6.05	5.7	5.5	4.7	4.8
Thomas Pearson,	6.25	5.75	5.65	5.2	5.05
Adam Lauder,	5.95	5.4	5.4	4.7	5.1
Total,	166.70	155.40	154.20	136.85	135.60
Average,	5.953	5.55	5.507	4.887	4.842

## OF LIVING PERSONS.—ENGLISHMEN.

Ear to Philoprogen- itiveness.	Size of the Head.	Proportion of Destructiveness to the size of the Head.	Proportion of Benevolence to the size of the Head.	Proportion of Conscientious- ness to the size of the Head.	Proportion of Acquisitiveness to the size of the Head.
3.95	12.6	1 : 2.135	1 : 2.571	1 : 2.8	1 : 2.470
5.1	13.65	1 : 2.294	1 : 2.394	1 : 2.394	1 : 2.437
4.8	13.3	1 : 2.180	1 : 2.254	1 : 2.394	1 : 2.254
5.05	13.3	1 : 2.375	1 : 2.375	1 : 2.742	1 : 2.462
4.9	13.2	1 : 2.256	1 : 2.275	1 : 2.538	1 : 2.490
4.35	12.9	1 : 2.263	1 : 2.263	1 : 2.931	1 : 2.345
4.9	13.5	1 : 2.213	1 : 2.547	1 : 2.934	1 : 2.327
4.9	13.4	1 : 2.252	1 : 2.481	1 : 2.913	1 : 2.310
5	13.7	1 : 2.362	1 : 2.584	1 : 2.978	1 : 2.537
4.8	13.7	1 : 2.322	1 : 2.322	1 : 2.795	1 : 2.446
4.7	12.9	1 : 2.263	1 : 2.457	1 : 2.687	1 : 2.345
4.3	13.3	1 : 2.180	1 : 2.533	1 : 2.955	1 : 2.293
4.8	13.35	1 : 2.243	1 : 2.617	1 : 2.966	1 : 2.472
4.65	13.4	1 : 2.233	1 : 2.436	1 : 2.528	1 : 2.392
4.6	13.8	1 : 2.225	1 : 2.464	1 : 3	1 : 2.206
4.5	13.7	1 : 2.283	1 : 2.322	1 : 2.490	1 : 2.609
4.7	13.7	1 : 2.322	1 : 2.686	1 : 3.044	1 : 2.537
5.1	14	1 : 2.258	1 : 2.5	1 : 2.8	1 : 2.456
4.9	13.6	1 : 2.285	1 : 2.518	1 : 2.775	1 : 2.344
4.9	14.25	1 : 2.355	1 : 2.522	1 : 2.908	1 : 2.415
5.4	13.8	1 : 2.421	1 : 2.442	1 : 2.653	1 : 2.603
4.5	13.45	1 : 2.299	1 : 2.359	1 : 2.744	1 : 2.537
4.85	14.1	1 : 2.274	1 : 2.473	1 : 2.764	1 : 2.473
4.6	13.65	1 : 2.533	1 : 2.702	1 : 2.875	1 : 2.6
4.8	14	1 : 2.352	1 : 2.456	1 : 2.886	1 : 2.568
4.85	13.6	1 : 2.247	1 : 2.472	1 : 2.893	1 : 2.385
4.95	14.	1 : 2.222	1 : 2.477	1 : 2.692	1 : 2.434
4.9	13.75	1 : 2.268	1 : 2.5	1 : 2.925	1 : 2.5
133.75	379.60	63.915	69.002	78.004	68.247
4.776	13.557	2.282	2.464	2.785	2.437



TABLE III.—MEASUREMENTS OF THE HEADS

	Destructive- ness to Destructive- ness.	Acquisitive- ness to Acquisitive- ness.	Ear to Benevo- lence.	Ear to Conscien- tiousness.	Ear to Lower Individual- ity.
James Jamieson,	5.8	5.6	5.7	4.6	4.9
John Weighton,	6.1	5.8	5.65	4.5	5.3
Daniel Maciver,	6	5.7	5.8	5.4	5.3
William Western,	5.9	5.2	5.6	4.8	5.4
William Burness,	5.95	6	5.8	5	5.1
John Brown,	6.1	6	6	4.9	5.3
James Stewart,	6.2	6.05	5.7	4.8	4.7
Duncan Lamont,	6	5.8	5.9	4.6	4.8
Neil Lamont,	5.75	5.5	5.4	4.5	4.7
Alex. Macgregor,	6.2	5.6	5.8	5.6	5.2
Robert Clephane,	5.95	5.2	5.6	4.6	5.2
William Macfarlane,	5.6	5.4	5.3	4.5	4.8
James Walker,	5.95	5.7	5.7	4.6	5
Alexander Don,	6.15	5.4	5.5	5.3	5.1
Hugh Bone,	5.95	5.5	5.5	4.5	4.9
Macnaughten Syme,	5.7	5.6	5.65	5	4.35
John Burn,	5.95	5.6	5.6	4.9	4.9
John Newbigging,	6.2	5.7	5.8	5.2	4.9
John Aitkin,	6	5.8	5.3	4.8	4.9
Robert Swanstoun,	6	5.8	5.2	4.7	4.9
James Hill,	5.95	5.6	5.3	4.6	4.3
William Allen,	6	5.5	5.7	5	4.9
James Browne,	6.05	5.65	5.4	4.75	4.6
Robert Young,	5.8	5.3	5.5	4.6	4.4
Thomas Stiles,	6	5.5	5.7	5	5
Total,	149.25	140.50	140.10	120.75	122.85
Average,	5.97	5.62	5.6	4.83	4.914

## OF LIVING PERSONS — SCOTCHMEN.

Ear to Philoprogen- itiveness.	Size of the Head.	Proportion of Destructiveness to the Size of the Head.	Proportion of Acquisitiveness to the Size of the Head.	Proportion of Benevolence to the Size of the Head.	Proportion of Conscientious- ness to the Size of the Head.
4.3	13.4	1 : 2.310	1 : 2.394	1 : 2.350	1 : 2.913
4.4	13.8	1 : 2.262	1 : 2.379	1 : 2.442	1 : 3.066
4.8	13.8	1 : 2.3	1 : 2.421	1 : 2.379	1 : 2.555
4.55	13.7	1 : 2.322	1 : 2.634	1 : 2.446	1 : 2.854
4.6	13.65	1 : 2.294	1 : 2.275	1 : 2.353	1 : 2.73
4.8	14.05	1 : 2.303	1 : 2.341	1 : 2.341	1 : 2.867
5	13.4	1 : 2.161	1 : 2.214	1 : 2.350	1 : 2.791
4.9	14	1 : 2.333	1 : 2.413	1 : 2.372	1 : 3.043
4.7	13.55	1 : 2.356	1 : 2.296	1 : 2.509	1 : 3.455
4.65	14.1	1 : 2.274	1 : 2.517	1 : 2.431	1 : 2.517
5	13.9	1 : 2.336	1 : 2.673	1 : 2.482	1 : 3.021
4.45	12.9	1 : 2.303	1 : 2.388	1 : 2.437	1 : 2.866
4.6	13.55	1 : 2.277	1 : 2.377	1 : 2.377	1 : 2.945
5.1	13.85	1 : 2.252	1 : 2.564	1 : 2.518	1 : 2.613
4.35	13.35	1 : 2.243	1 : 2.427	1 : 2.427	1 : 2.966
4.55	13.6	1 : 2.385	1 : 2.428	1 : 2.407	1 : 2.72
4.9	13.55	1 : 2.277	1 : 2.419	1 : 2.419	1 : 2.765
5.1	13.6	1 : 2.193	1 : 2.385	1 : 2.344	1 : 2.615
4.8	13.9	1 : 2.166	1 : 2.224	1 : 2.622	1 : 2.891
4.9	13.9	1 : 2.166	1 : 2.224	1 : 2.673	1 : 2.957
4.8	13.85	1 : 2.310	1 : 2.473	1 : 2.613	1 : 3.010
4.85	13.9	1 : 2.315	1 : 2.527	1 : 2.438	1 : 2.78
4.8	13.85	1 : 2.289	1 : 2.451	1 : 2.564	1 : 2.916
5	13.4	1 : 2.310	1 : 2.528	1 : 2.436	1 : 2.913
4.8	13.8	1 : 2.166	1 : 2.509	1 : 2.421	1 : 2.76
118.70	342.35	56.903	60.481	61.151	71.529
4.748	13.694	2.276	2.419	2.446	2.861



TABLE IV.—MEASUREMENT OF THE HEADS

	Destruc- tiveness to Destruc- tiveness.	Acquisi- tiveness to Acquisi- tiveness.	Ear to Be- nevolence.	Ear to Conscien- tiousness.	Ear to Lower Individual- ity.
John Walls,	5.9	5.7	5.4	4.5	4.5
William Burnside,	6	5.6	5.2	4.8	4.9
Robert Burnside,	5.75	5.6	5.6	4.6	5.3
James Moffat,	5.85	5.5	5.4	4.65	4.7
Fergus Solan,	5.8	5.4	5.5	4.8	5
Michael Power,	5.8	5.55	5.6	4.9	4.65
William Yarwood,	6.1	5.4	5.4	4.55	4.8
Bryan Lynch,	6	5.7	6	5.4	4.9
John Glennon,	5.9	5.1	5.5	4.7	5.05
Shady Malkare,	6.25	5.9	5.35	4.6	4.9
John Fanagan,	6	5.5	5.4	4.7	5.2
John Glaigherty,	6	5.6	6	4.6	4.9
John Francis,	5.7	5.1	5.2	4.7	4.9
Patrick Bremer,	5.85	5.6	5.6	5.1	4.7
David Fleming,	5.9	5.55	5.4	4.6	4.8
Hugh M'Intyre,	5.6	5.3	5.6	4.6	4.9
Den Donovan,	5.9	5.5	5.25	4.6	4.7
John Citter,	6.15	5.85	5.35	4.8	4.6
Thomas Cornigen,	5.7	5.3	5.45	4.6	4.7
Andrew Philson,	6.3	6	5.7	4.7	4.9
William Steward,	6.2	5.8	6	5.1	5.1
Charles Macgrevy,	6	5.35	5.3	4.6	4.7
Charles Stewart,	6.15	5.7	5.4	5	4.5
Barney Macgehghey,	5.25	5.25	5.3	4.8	4.65
William Euston,	5.7	5.35	5.4	4.75	4.6
Thomas Read,	5.7	5.4	5.7	5	4.9
Alexander Kellie,	6.05	5.55	5.55	4.85	5.2
Total,	159.50	149.15	148.55	128.60	130.65
Average,	5.907	5.524	5.501	4.762	4.838

## OF LIVING PERSONS.—IRISHMEN.

Ear to Philopro- genitive- ness.	Size of the Head.	Proportion of Destructiveness to the size of the Head.	Proportion of Acquisitiveness to the size of the Head.	Proportion of Benevolence to the size of the Head.	Proportion of Conscientious- ness to the size of the Head.
4.1	13.3	1 : 2.254	1 : 2.333	1 : 2.5	1 : 2.955
4.5	13.6	1 : 2.266	1 : 2.428	1 : 2.615	1 : 2.833
4.35	13.55	1 : 2.356	1 : 2.419	1 : 2.419	1 : 2.945
5	13.7	1 : 2.341	1 : 2.490	1 : 2.537	1 : 2.946
4.8	13.9	1 : 2.396	1 : 2.574	1 : 2.527	1 : 2.895
4.7	13.6	1 : 2.344	1 : 2.450	1 : 2.428	1 : 2.775
4.9	13.9	1 : 2.278	1 : 2.574	1 : 2.574	1 : 3.054
4.75	13.8	1 : 2.3	1 : 2.421	1 : 2.3	1 : 2.555
4	13.9	1 : 2.355	1 : 2.725	1 : 2.527	1 : 2.957
4.6	13.95	1 : 2.232	1 : 2.364	1 : 2.607	1 : 3.033
4.6	13.6	1 : 2.266	1 : 2.472	1 : 2.518	1 : 2.893
5.2	13.7	1 : 2.283	1 : 2.446	1 : 2.283	1 : 2.978
4.75	14	1 : 2.456	1 : 2.745	1 : 2.692	1 : 2.978
5.2	13.9	1 : 2.341	1 : 2.482	1 : 2.482	1 : 2.725
4.8	13.5	1 : 2.288	1 : 2.432	1 : 2.5	1 : 2.934
4.9	13.1	1 : 2.339	1 : 2.471	1 : 2.339	1 : 2.847
4.2	13.	1 : 2.203	1 : 2.363	1 : 2.476	1 : 2.826
4.65	13.95	1 : 2.268	1 : 2.384	1 : 2.607	1 : 2.906
4.6	13.05	1 : 2.289	1 : 2.462	1 : 2.394	1 : 2.836
4.9	14.	1 : 2.222	1 : 2.333	1 : 2.456	1 : 2.978
5.4	14.3	1 : 2.306	1 : 2.465	1 : 2.383	1 : 2.803
5.1	13.1	1 : 2.183	1 : 2.448	1 : 2.471	1 : 2.847
4.9	13.3	1 : 2.162	1 : 2.333	1 : 2.462	1 : 2.66
4.75	13.4	1 : 2.552	1 : 2.552	1 : 2.528	1 : 2.791
4.75	13.5	1 : 2.368	1 : 2.523	1 : 2.5	1 : 2.844
4.75	13.5	1 : 2.368	1 : 2.5	1 : 2.368	1 : 2.7
4.75	13.95	1 : 2.305	1 : 2.513	1 : 2.513	1 : 2.880
127.90	368.05	62.321	66.702	67.006	77.374
4.737	13.631	2.308	2.470	2.481	2.865



TABLE V.—MEASUREMENTS OF THE  
EDINBURGH JAIL

	Acquisitive- ness to Acquisitive- ness.	Destructive- ness to Destructive- ness.	Ear to Bene- volence.	Ear to Con- scientious- ness.
John Smith,	5.9	6	5.8	4.7
P. Macdonald,	5.55	6	5.45	4.65
Donald Ross,	5.55	5.6	5.9	4.8
David Stewart,	5.4	5.75	5.4	5
John Cantley,	5.5	5.55	5	5
William Lindsay,	5.5	5.8	5.85	5.2
John Macartney,	5.4	5.6	5.5	4.8
John Clerk,	5.3	5.65	5.05	4.8
John Ross,	5.9	6	5.3	4.5
Robert Brown,	5.3	5.7	5.75	4.55
S. Forbes,	5.7	5.9	5.3	5
John Watson,	5.7	5.95	5.5	5.25
James Noble,	5.4	5.75	5.45	4.8
William Percy,	5.8	6.2	5.3	4.7
F. M'Nally,	5.8	5.95	5.6	4.7
George Henderson,	5.6	5.8	5.4	4.7
Alexander Laurie,	5.5	5.7	5.5	4.7
Duncan M'Gregor,	5.4	5.8	5.3	4.6
Edward Cornel,	4.9	5.25	5.2	4.5
Robert Ferguson,	5.7	5.8	5.6	4.9
James Robertson,	5.35	5.7	5.85	4.8
John Bell,	5.4	5.4	5.2	5.1
Total,	121.55	126.85	120.20	105.75
Average,	5.525	5.765	5.463	4.806

# HEADS OF THIEVES CONFINED IN THE AND BRIDEWELL.

Ear to Lower Individuality.	Ear to Philo- progenitive- ness.	Size of the head.	Proportion of Acquisitiveness to the size of the Head.	Proportion of Conscientious- ness to the size of the Head.
4.9	5	13.8	1 : 2.338	1 : 2.936
4.5	4.5	13.9	1 : 2.504	1 : 2.989
4.75	4.6	13.6	1 : 2.450	1 : 2.833
4.65	4.65	12.4	1 : 2.296	1 : 2.480
4.3	4.6	13.05	1 : 2.372	1 : 2.610
4.8	4.9	12.3	1 : 2.236	1 : 2.365
4.65	4.65	13.65	1 : 2.527	1 : 2.843
4.35	4.35	13.15	1 : 2.481	1 : 2.739
4.7	4.5	13.5	1 : 2.288	1 : 3.000
4.45	4.55	13.25	1 : 2.500	1 : 2.912
4.5	4.5	13.4	1 : 2.350	1 : 2.680
4.7	5	13.9	1 : 2.438	1 : 2.647
4.5	5.1	13.7	1 : 2.537	1 : 2.854
4.5	4.9	13.8	1 : 2.379	1 : 2.936
4.7	4.3	13.8	1 : 2.379	1 : 2.936
4.5	5.1	13.45	1 : 2.401	1 : 2.861
4.6	4.5	13.1	1 : 2.381	1 : 2.787
4.55	4.6	13.3	1 : 2.462	1 : 2.891
4.6	4.65	12.9	1 : 2.632	1 : 2.866
4.7	4.8	13.7	1 : 2.403	1 : 2.795
4.75	4.6	13.4	1 : 2.504	1 : 2.791
4.6	4.7	13.1	1 : 2.425	1 : 2.568
101.25	103.05	294.15	53.283	61.319
4.602	4.684	13.370	2.421	2.787



TABLE VI.—MEASUREMENTS

	Destructive- ness to Destructive- ness.	Secretive- ness to Secretive- ness.	Acquisitive- ness to Acquisitive- ness.	Combative- ness to Combative- ness.	Meatus to Beneve- lence.
Burke,	5.35	5.4	4.8	5	5.1
Haggart,	5.2	5.45	4.6	5.1	5.15
Scott,	5.3	5.3	4.85	4.75	4.8
Anderson,	5.2	5.35	4.7	4.75	5.05
Glen,	5.4	5.55	4.65	4.85	5.05
Balfour,	5.45	5.6	4.95	4.8	5.2
Gordon,	5.3	5.5	4.6	4.8	5
Cockburn,	5.4	5.6	4.8	5	5.2
Lingard,	4.95	4.9	4.4	4.8	4.75
Pepe,	4.8	5.05	4.5	4.45	4.95
Macmillan,	5.3	5.4	4.8	5.1	5.2
Mortimur Collins,	5.35	5.6	5	4.95	5.25
Clydesdale,	5.2	5.25	4.7	4.7	5.2
M'Kean,	5.4	5.2	4.9	4.9	5.1
Buchanan,	5.3	5.2	4.75	4.6	5.1
Kerr,	5.5	5.6	5.2	4.8	5.4
Divan,	5	5.1	4.6	4.9	5.2
Total,	89.40	91.05	80.80	82.25	86.70
Average,	5.55	5.35	4.75	4.83	5.1

## OF THE CRANIA OF MURDERERS.

Meatus to Conscientiousness.	Meatus to Causality.	Meatus to lower Individuality.	Weight of the Encephalon.	Proportion of Destructiveness to the Encephalon.	Proportion of Benevolence to the Encephalon.	Proportion of Conscientiousness to the Encephalon.
4.6	4.6	4.5	20507	1 : 3833.084	1 : 4020.980	1 : 4458.043
4.4	4.45	4.45	22177	1 : 4264.807	1 : 4306.213	1 : 5040.227
3.7	4.2	4.45	18796	1 : 3546.415	1 : 3915.833	1 : 5080.000
4.5	4.3	4.55	20507	1 : 3943.653	1 : 4060.792	1 : 4557.111
4.2	4.45	4.6	21953	1 : 4065.370	1 : 4347.128	1 : 5226.904
4.35	4.5	4.7	21406	1 : 3927.706	1 : 4116.538	1 : 4920.919
4.4	4.4	4.5	19801	1 : 3736.037	1 : 3960.200	1 : 4500.227
4.2	4.5	4.6	19760	1 : 3659.259	1 : 3800.000	1 : 4704.761
4.15	4.1	4.15	16274	1 : 3287.676	1 : 3425.263	1 : 3425.263
4.2	4.5	4.7	19429	1 : 4047.708	1 : 3925.050	1 : 4625.952
4.6	4.45	4.4	19589	1 : 3696.037	1 : 3767.115	1 : 4258.478
4.6	4.6	4.8	24121	1 : 4508.598	1 : 4594.476	1 : 5243.695
4.75	4.4	4.15	21934	1 : 4218.076	1 : 4218.076	1 : 4617.684
4.4	4.4	4.4	19995	1 : 3702.777	1 : 3920.588	1 : 4544.318
4.4	4.4	4.4	<i>broken</i>			
4.9	4.6	4.6	<i>an arterial preparation.</i>			
4.5	4.2	4.2	22840	1 : 4568.000	1 : 4392.307	1 : 5075.555
74.85	75.05	76.15	309089	59005.203	60765.559	70279.137
4.4	4.41	4.47	20605	3933.680	4051.037	4685.275



REFERENCES  
TO THE  
TABLES OF MEASUREMENTS.

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TABLE I.

THE reader is, in this Table, presented with the measurements of all the certain male crania in the Collection which Dr Spurzheim sent from Paris to this city, and which are at present in the Edinburgh Museum. These crania were sent over to this country for the purpose of illustrating the truth of Phrenology. The same evidence, therefore, may fairly be admitted in exposing its delusions.

TABLE II.

This Table presents the measurements of the heads of *Englishmen*. The first *ten* are privates in the Third Dragoon Guards, quartered at Piershill barracks; and the following *eighteen*, gunners in the Royal Artillery at Leith Fort.

TABLE III.

In this Table, measurements of the heads of *Scotchmen* are presented. The first *seven* are porters, taken without any selection from the stand in Adam Square; the *three* next from the stand in Castle

Street; the *ten* following are privates in the Third Dragoon Guards; and the remaining *five*, gunners in the Royal Artillery.

#### TABLE IV.

In this Table, the measurements of the heads of *Irishmen* are presented. The first *three* are porters from the stand in College Street; the following *eleven*, privates in the Third Dragoon Guards; and the remaining *thirteen*, gunners in the Royal Artillery.

#### TABLE V.

In this Table, measurements are presented of the heads of the most notorious thieves at present confined in the Jail and Bridewell of Edinburgh. One is an *Englishman*, another an *Irishman*, and the remaining 20 are *Scotchmen*.

#### TABLE VI.

In this Table the reader is presented with measurements of the crania of executed murderers. The skulls of Burke, Haggart, Scott, Anderson, Glen, Cockburn, and Pepe, are in the Edinburgh Anatomical Museum. That of Lingard is in the Museum of the Royal Physical Society. The skulls of Macmillan, Collins, Clydesdale, M'Kean, Buchanan, Kerr, and Divan, are in the Anatomical Museum in the University of Glasgow.

FINIS.



THE HISTORY OF THE  
CITY OF LONDON

FROM THE FOUNDATION  
TO THE PRESENT TIME

BY  
JOHN STOW

THE SECOND PART

OF THE HISTORY

OF THE CITY OF LONDON

# ANSWER

TO

“OBSERVATIONS ON THE PHRENOLOGICAL DE-  
“VELOPMENT OF BURKE, HARE, AND OTHER  
“ATROCIOUS MURDERERS, &c.—BY THOMAS  
“STONE, ESQ.,” &c.

---

BY GEORGE COMBE.

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“A host of enemies appeared, each eager to obtain the unfortunate pre-emi-  
“nence of being the first to attack conclusions which the unanimous voice of pos-  
“terity was to confirm.”

*Playfair on Newton's Discovery of the Composition of Light.*

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EDINBURGH:

JOHN ANDERSON, JUN., 55, NORTH BRIDGE STREET,  
AND SIMPKIN AND MARSHALL, LONDON.

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1829.



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# ANSWER

TO

“ OBSERVATIONS ON THE PHRENOLOGICAL DEVELOP-  
“ MENT OF BURKE, HARE, AND OTHER ATROCIOUS  
“ MURDERERS, &c., BY THOMAS STONE, ESQ.,” &c.

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It is a leading doctrine of Phrenology, that, size in an organ, other conditions being equal, is a measure of *power* in the faculty connected with it. Mr Stone's "Observations" tend to controvert this principle, and the means by which he assails it first demand attention.

In the phrenological works the following directions are given *regarding the method of ascertaining the size* of the organs:—

“ Large size may consist in length or breadth, or in both. A  
“ line passing through the head from one ear to the other would  
“ nearly touch the *medulla oblongata*, and hence the external open-  
“ ing of the ear is assumed as a convenient point from which to esti-  
“ mate length. *The length of an organ is ascertained by the dis-*  
“ *tance from the medulla oblongata to the peripheral surface.* Thus  
“ the organs of Intellect are situated in the forehead, and in pro-  
“ portion to the length of the line from the ear to that region is the  
“ length of these organs. The *breadth* of an organ is judged of *by*  
“ *its peripheral expansion*; and it is a general law of physiology,  
“ that the breadth of an organ throughout its whole course bears a  
“ relation to its expansion at the surface: the optic and olfactory  
“ nerves are examples in point. An organ may thus be likened to  
“ an inverted cone, with its apex in the medulla and its base at the  
“ surface of the brain; the broader the base and longer the distance  
“ betwixt it and the apex, the greater will be the size, or the quan-  
“ tity of matter which it will contain. Hence, if the line from the  
“ ear to the forehead is much larger than from the ear backward,



“and the breadth nearly the same, we infer that the organs in the  
 “forehead predominate. If, on the other hand, the forehead is very  
 “narrow, as in Thurtell, and the hind-head very broad, we hold the  
 “posterior organs to predominate, although the length were the  
 “same in both directions. Measurement by callipers is useful for  
 “ascertaining general Size. The following are a few measure-  
 “ments from nature, taken promiscuously from many more in my  
 “possession.”

(Here follows a table of measurements by callipers.)

“These measurements are taken above the muscular integuments,  
 “and show the size of heads in these directions; but they are not  
 “given as indications of THE ABSOLUTE DIMENSIONS of any of  
 “the phrenological organs. The callipers are not suited for giv-  
 “ing this latter information, for they do not measure from the  
 “medulla oblongata, nor do they indicate breadth of fibre.\* The  
 “new craniometer is preferable for ascertaining absolute length, and  
 “the breadth may be judged of by means of the hand or eye.”—  
*System of Phrenology*, p. 38.

In Mr Stone's "Observations" the *breadth* of the organs is entirely omitted, and his results are founded on measurements avowedly including length alone. This fact, although obvious to a Phrenologist at a single glance, he carefully conceals from his uninitiated readers, and the acknowledgment of it only transpires incidentally towards the end of his pamphlet. On page 44 he says, "I propose estimating  
 "the development of these, (the Organs of the Moral Sentiments,) by measuring, as the Phrenologists direct, the organ of Benevolence and that of Conscientiousness from the meatus. This measurement gives the distance of the expansion, or the length of the development, which is the first and principal condition of the size of every phrenological organ. The breadth or periphery of each is, on the other hand, capable of no demonstration, inasmuch as the circumscribed boundaries of each organ are purely ideal, and the exact limits ascribed to each depend in every instance on the fancy of the manipulator."—Page 44.

Accordingly, Mr Stone makes no attempt to estimate the breadth.

He calls his measurements of the length of the organs, omitting their breadth, their *absolute size*. Nay, in many

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\* So little are measurements regarded by Phrenologists as adequate to determine the size of particular organs, that in the whole writings of Dr Gall and Dr Spurzheim not a single measurement is mentioned.

instances, he does not even give their length. For example, he measures across the head, from Destructiveness to Destructiveness, from Cautiousness to Cautiousness, &c., to ascertain the length, instead of measuring from the medulla oblongata to the surface of these organs. In short, in *all the organs* he deliberately omits the peripheral expansion, which is the only index to breadth; *in many* he substitutes an erroneous measurement of length for the true one; and even in calculating length alone he proceeds on data absolutely absurd and unintelligible. By results so found he boasts that he has overturned Phrenology!

*Secondly*, It is farther stated in the phrenological works, that "it ought to be kept in view, in the practical application of Phrenology, that it is the size of each organ in proportion to the others, *in the head of the individual observed*, and not their *absolute size*, or their size in reference to any standard head, that determines the predominance in him of particular talents or dispositions. Thus, in the head of Bellingham, Destructiveness is very large, and the organs of the Moral Sentiments and Intellect are small in proportion; and, according to the rule, that, *cæteris paribus*, size determines energy, Bellingham's most powerful tendencies are inferred to have been towards cruelty and rage. In the skulls of several Hindoos the organ of Destructiveness is small in proportion to the others, and we conclude, that the tendency of such individuals would be weakest towards the foregoing passions. But in the head of Gordon, the murderer of the pedlar boy, the measurement from Destructiveness to Destructiveness is  $5\frac{1}{8}$ , and in the head of Raphael it is  $5\frac{5}{8}$  inches. Here the *absolute size* of the organ is greater in Raphael, and yet he was an amiable man of genius, and Gordon an atrocious murderer. This illustrates the rule now under consideration. In Gordon the organs of the Moral Sentiments and Intellectual Faculties are small, and that of Destructiveness is the largest in the brain; while in Raphael, the Moral and Intellectual Organs are large. On the foregoing principle, the most powerful manifestations of Raphael's mind ought to have been in the department of Sentiment and Intellect, and those of Gordon's mind in Destructiveness and animal passion; and their actual dispositions corresponded. Still the dispositions of Raphael would be characterized by the large size of this organ. It would communicate that warmth and vehemence of temper which are found only when it is large, although the higher powers might restrain it from abuse."—*System of Phrenology*, p. 44.

In Mr Stone's pamphlet the principle here laid down is



disregarded from beginning to end; and one illustration will show the effect in a palpable form. Suppose a physiologist to say that, other conditions being equal, the different fingers of any particular hand will be able to support weights in proportion to their size; for instance, that the middle-finger will support a weight as much greater than the little finger as it exceeds it in quantity of matter; it is obvious that this principle would apply equally to the hand of a child and to that of a man, because it is the different fingers *of the same hand* which must be compared. The physiologist might measure the length and breadth of any particular hand about which he might write, to indicate whether it was a man's or a child's hand that formed the subject of his discourse, but he would never assume the length alone of each finger as affording an absolute measure of its strength. Suppose, however, that Mr Stone should take upon himself the task of refuting the foregoing simple and intelligible proposition, then, following his present method, he would measure *the whole hands* of 28 Englishmen, 27 Irishmen, and 25 Scotsmen. He would assume from these data certain dimensions as the average size of the hand over the whole human race; he would next measure the *length* of A's little finger, omitting the breadth, and call this *its absolute size*; he would then compare this absolute size with the average dimensions of the hand obtained as above; and, lastly, he would triumphantly proclaim that he had refuted the physiologist, and by "*his measurements*" overturned his proposition *in toto*.

This is literally what Mr Stone has done. He says, "I give first the *absolute* size of the several organs; secondly, their *relative* size, or the proportion which each bears to the contents of the skull, or to the weight of the encephalon." Now, 1st, he has *not* given the absolute size: 2dly, giving the *absolute* size is a piece of pure and gratuitous absurdity; for as it is the predominance in size of one organ over another IN THE SAME HEAD that determines the preponderance of one fa-

culty over another in the mind, the comparison of the *absolute size* of an organ in one man with its *absolute size* in another is entirely irrelevant and contrary to every phrenological principle.

3dly, When Mr Stone gives the *relative* size of an organ to the contents of the skull, he includes breadth in estimating the *contents of the skull*; for he fills it with sand and weighs the contents; or, where this cannot be done, he measures the length, breadth, and height of the skull, and adds these dimensions together; but he *omits breadth* in estimating the size of each particular organ. He therefore compares dimensions altogether dissimilar; and to hold up the results of such an investigation as scientific is to set common sense and philosophy at defiance.

The reader will now be able to estimate the value of Mr Stone's statements. The following are extracted at random from his pamphlet:—

“ On comparing Hare's organ of Destructiveness with my table of Englishmen, (twenty-eight in number,) I find

“ 11 have it in its *absolute size* larger; 6 in *absolute size* the same as Hare.

“ 20 have it in proportion to the size of the head larger.

“ The average *absolute size* of the organ of Destructiveness in the twenty-eight Englishmen is 5.953.

“ Its average proportion to the size of the head in the same is as 1 to 2.282.

“ The result is, the organ of Destructiveness in Hare is, in its *absolute size*, *not above* the average; and in its *relative size*, or in proportion to the dimensions of the head, it is *below* the average.

“ On examining my table of Scotchmen, (twenty-five in number,) I find

“ 13 possess the organ of Destructiveness in its *absolute size* larger than Hare.

“ 6 the same.

“ 20 possess it *larger* in proportion to the size of the head.

“ The average *absolute size* of the organ of Destructiveness in the 25 Scotchmen is 5.97.

“ The average proportion to the size of the head is as 1 to 2.276.

“ The result is, that, compared with my table of Scotchmen, the organ of Destructiveness in Hare is nearly the same in its *absolute size* as the average, the former measuring 5.95, the latter 5.97 *inches*; but, in proportion to the size of the head, Hare's organ of Destructiveness is *below* the average.



" On referring to my table of Irishmen, (twenty-seven in number,) I perceive

" 12 possess the organ of Destructiveness in its absolute size  
" *larger* than Hare.

" 16 possess it larger, in proportion to the size of the head.

" The average *absolute* size of this organ in the 27 Irishmen  
" is 5.907.

" Its average proportion to the size of the head in the same is  
" as 1 to 2.308.

" The result is, that, compared with my table of Irishmen, the organ of Destructiveness in Hare is, in its *absolute* size, nearly the same as the average, the former being 5.907, the latter 5.95 *inches*; but, in proportion to the size of the head, Hare's organ of Destructiveness is *below* the average."—Page 22.

Here is a great parade of words and figures, looking like philosophy and science; but every step of the statement is a deception. 1st, It is of no importance what the size of Hare's organ of Destructiveness is compared with the same organ in Englishmen, Irishmen, and Scotchmen, because Hare's dispositions depend exclusively on the size of that organ compared with the size of the moral organs in his own head; and any person who will take the trouble to look at the cast in the phrenological collection, and include breadth as well as length, will see that it is very large compared with his moral organs. The object for which a Phrenologist measures heads is to determine whether the whole brain is large or small; he measures the length and breadth of the head to let it be known whether he is speaking of a large head or a small one; but there is no example in any phrenological work of acknowledged authority of such a preposterous and absurd principle of measurement as that which Mr Stone here chooses to adopt.

2dly, When Mr Stone affirms, that the *relative* size of Destructiveness in Hare's head, or its size "in proportion to the dimensions of the head, is below the average," his statement is rendered altogether fallacious by the facts, that he omits the breadth of the organ of Destructiveness in estimating its size; that he does not measure even its length from the medulla oblongata; while he combines length, breadth, and thickness, in calculating the dimensions of the

whole head with which he compares it. His Englishmen, his Irishmen, and his Scotchmen, therefore ; his decimals, and his long tables of measurements, looking like logarithms, all go for nothing : they are the decorations of a phantom, and serve no purpose but to add to the deceptive powers of an illusion.

Indeed the results of his measurements and tables show that he has proceeded on no intelligible or consistent principle whatever. They are so palpably ludicrous that they actually thrust a "*reductio ad absurdum*" upon the notice of the reader. For example,—in discussing Hare's head, he says, "The proportion of *Destructiveness* to the size of the head is as 1 to 2.319. The proportion of Benevolence to ditto is as 1 to 2.555. The proportion of Conscientiousness to ditto is as 1 to 3 ;" that is to say, of Hare's head, Destructiveness constitutes within a small fraction of one half ; it is as 1 to  $2\frac{1}{3}$  ; Benevolence constitutes very nearly another half, for it is as 1 to  $2\frac{1}{2}$  ; and Conscientiousness is exactly one-third ; so that the size of these three organs exceeds that of the whole head which contains them, and all the other 32 organs have no size whatever !

In citing this example I am not taking Mr Stone at disadvantage, catching him tripping, as it were, in some huge calculation amidst his mighty chaos of decimals ; on the contrary, his whole tables present similar absurdities to the eye. "Table II." will serve as an illustration.

"Table II. Measurements of the Heads of living persons,—Englishmen.

"Average size of the head in 28 Englishmen,	13.557
"Average proportion of <i>Destructiveness</i> to the size of	
"the head, in ditto,	2.282
"Ditto ditto of <i>Benevolence</i> to ditto in ditto,	2.464
"Ditto ditto of <i>Conscientiousness</i> to ditto in ditto,	2.785
"Ditto ditto of <i>Acquisitiveness</i> to ditto in ditto,	2.437

Proportion of these four organs to the size of	
the whole head,	————— 9.968

Remains for the other <i>thirty-one organs</i> ,	————— 3.589
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It is quite obvious that, if Mr Stone had proceeded two steps farther in his measurement of particular organs, he would again have made the sum of the separate dimensions of a few organs greater than the size of the whole head.

He is equally unmerciful to his Scotchmen and Irishmen.

The size of the whole head in the Scotchmen is 13.694

The aggregate size of the same four organs is 10.002

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Remains for the other 31 organs of the Scotchmen, 3.692

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The size of the whole head in Mr Stone's Irishmen  
is . . . . .

13.631

The aggregate size of the same four organs is 10.124

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Remains for 31 organs of Irishmen, 3.507

It is unnecessary to discuss Mr Stone's statements farther in detail; but I am compelled, in justice to the Phrenological Society of Washington, to advert to one of them. A report was furnished by Dr Brereton, secretary of the Phrenological Society of that city, of the crimes committed by a number of Spanish pirates, and of their phrenological development. He sent, at the same time, casts of their skulls to the Society of Edinburgh, and one of them is named Pepe. The report was published in December, 1828, in No 19 of the Phrenological Journal. Mr Stone informs his readers, that "the skull of Pepe was brought over to this country  
" by Captain Graham, and presented to the Edinburgh Anatomical Museum by his brother, the distinguished professor of botany in this University." He then abridges the account of the Washington Pepe's murders from the American report, and afterwards proceeds thus:—"The secretary  
" of the Phrenological Society at Washington transmitted to this  
" country the report whence these particulars have been extracted,  
" and, at the same time, the measurement of the skull. I am under the necessity of stating, that the latter is very inaccurate.  
" I do not pretend to know what sort of callipers are used in Ame-

“rica, or whether the elsewhere immutable principles of mathematical science may there bow down before the genius of Phrenological superstition, but of this I am satisfied, that the organ of Destructiveness has here been represented more than half an inch larger than it actually measures. The dimension of it, as given in the Phrenological Journal, is 5.4 inches, which, be it observed, is at any rate *below* the average ; but the correct measurement is only 4.8 ; and I defy any person, using the callipers honestly, to make so considerable a difference.”

The arrogance of these strictures would be remarkable even although they were well founded ; but their demerit is greatly enhanced by the fact, that the only “dishonesty,” to use Mr Stone’s expression, or blunder, as I prefer calling it, is chargeable on himself. The name Pepe is an abbreviation of the Spanish for Joseph, and is very common among the lower orders in the Spanish West Indies. The American report styles the criminal “*Pepe*, alias *Jose Hilario Casares*.” The skull brought by Captain Graham to Edinburgh was in Professor Graham’s possession in 1826 ; the Pepe, whose cast was transmitted by Dr Brereton, was tried at Richmond, Virginia, on 16th July, 1827, and executed subsequently. The first fact is established by inquiry at Dr Graham ; and the second is proved by the report of the Washington Pepe’s trial, published in the Phrenological Journal.

The American measurement of the skull of Pepe, alias Jose Hilario Casares, is perfectly accurate, and Mr Stone’s attack on it rests exclusively on a blunder of his own. His error is less excusable than, from the coincidence of names, it might at first appear, because he had access to the skull of Pepe, procured by Captain Graham, and also to the cast of the other Pepe, which is open to public inspection in the Phrenological Society’s Hall, and could easily have discovered their difference. Farther, by inquiring at Professor Graham, he could with equal facility have ascertained the date when Captain Graham brought his Pepe’s skull to Edinburgh, and he saw the date of the other Pepe’s trial recorded in the Journal. The very circumstance of so



great a discrepancy appearing between the Washington measurement and his own ought to have led him to measure the cast in the Phrenological Hall; and by doing which he would have discovered that the skulls are different. This is the second time that Mr Stone has charged "dishonesty" against Phrenologists, founded solely on gross mistakes of his own.\* If he had found one blunder of equal magnitude committed by any Phrenologist he would have exulted over it through a whole pamphlet. These American measurements, be it also observed, were not given as indications of the size of particular organs, but merely to show the general size of the head; so that Mr Stone's attack was wholly irrelevant, even although an error had been committed by Dr Brereton, which was not the case.

Here, then, is a specimen of Mr Stone's "Facts and Observations" in opposition to Phrenology; and I now solicit the attention of the reader to the reception of them by part of the public press of Edinburgh. Ever since Dr Gordon's celebrated attack on Phrenology in the 49th Number of the Edinburgh Review, fourteen years ago, the newspapers of this city (with few exceptions) have announced with high encomiums each successive attack on Phrenology as utterly subversive of its pretensions. The very fact of their repeating this proclamation year after year during so long a period seems never to have struck themselves as demonstrating its falsity and absurdity. If Phrenology was refuted by Dr Gordon, why did they laud Dr Roget for demolishing it?—if Dr Roget succeeded, why did they praise Dr Barclay so extravagantly for subverting what was already overturned?—if Dr Barclay was a fatal enemy, why did they extol Mr Jeffrey to the skies as the prince of all Antiphrenologists?—if Jeffrey left no shred of the science sticking to another, why did they sound a loud acclaim to Sir William

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\* See Phrenological Journal, vol. v. p. 264.

Hamilton for his reputed victories over its scattered members?—and if Sir William's brows were decorated with well-earned laurels on account of his magnanimous achievements, why do they now cling to Mr Stone, as if no other champion had tilted with success against Phrenology? The only inference that can reasonably be drawn is, that those who uttered these eulogiums entertained a great yet childish prejudice against Phrenology,—that they dreaded its ultimate triumph as implying a censure on their own conduct towards its founders,—but that, even while they condemned it, they were conscious of being ignorant both of its nature and its evidence, and were beset by that inward misgiving, that secret uneasiness, which ever haunts those who oppose truth on the strength of prejudice alone. It was this state of feeling which caused them to hail with deep interest every shadow of an argument, and every phantom of a fact by which they might justify to their own minds the doubtful conduct which they had pursued.

If any evidence had been wanting to show that the conductors of the periodical press of Edinburgh (with the exceptions alluded to\*) are really in this condition of mind in regard to Phrenology, their notices of Mr Stone's pamphlet have supplied it to demonstration. So far from having detected the palpable misrepresentations which pervade it from beginning to end, and so far from being aware that Mr Stone's prior pamphlet, his boasted "Evidences against Phrenology," had been dissected by an able writer in the London Medical and Surgical Journal, who had exposed in

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\* The conductors of the Scotsman have paid some attention to Phrenology in a spirit of real inquiry after truth, and, in consequence of superior information, they have for many years spoken of its pretensions in a strain remarkably different from that of the papers about to be mentioned. The older Edinburgh newspapers also have of late become less zealous in the cause of opposition; and the editor of the Weekly Journal appears fairly to have given up his hostility. Blackwood's Magazine likewise, from being a violent opponent, has become neuter; so that the active opposition now rests chiefly with the junior periodicals of this city; but they are only following the course previously run by their seniors.



it such a tissue of misrepresentations, of erroneous quotations of glaring interpolation in authorities cited ; in short, such philosophical blunders and literary delinquencies as are rarely to be met with in the annals of controversy ; so far were they from knowing anything of this, that they have actually extolled his present pamphlet to the skies, as the highest manifestation of talent that has appeared against the new doctrines. Far from shrinking from their criticisms, I rejoice to assist in disseminating them, and would willingly preserve them, were it in my power, from that oblivion which their authors will speedily invoke as their most desirable retreat. But let these editors speak for themselves.

The *Observer's* commentary, in the paper of 1st May, 1829, is the following:—"Mr Stone is one of the most active and most formidable combatants that has yet entered the lists as an Antiphrenologist. We cannot at this moment number the attempts that he has made to rout his opponents ; but it is known to all who take an interest in the warfare, that he has repeatedly returned to the charge, and that each successive charge has been more successful than its predecessor. This last one we regard as the most brilliant of all ; and if the phrenological champions do not make a good rally, and speedily regain the positions from which he has dislodged them, we suspect they will be regarded as having tacitly agreed to an unconditional surrender. \* \* \* \*

"This section of his pamphlet (whether it is possible to distinguish the crania of murderers from other crania by the phrenological indications attributed to them) is exceedingly interesting.

"He gives the names of all the individuals whom he measured, who were chiefly porters, and privates belonging to the 3d Dragoon Guards at Piershill, and Royal Artillery at Leith, and whom the Phrenological Society may remeasure if they think proper. In short, *candour and fairness characterize his whole argument*, and we shall open the next Number of the Phrenological Journal with some excitement, knowing that so formidable an adversary must be answered."

The Edinburgh Literary Journal far surpasses the *Observer* in its encomiums. In the number dated 2d May, the editor says, "This is one of the most efficient knock-down blows which Phrenology has yet received. Nobody can read this pamphlet and believe in Phrenology ; we question whether Mr Combe himself can. We should not be sur-



“prised to hear of his abruptly terminating his lectures in Dublin, and going into retirement for the rest of his life. ‘Assail our facts, and we are undone; Phrenology admits of no exceptions,’ has been his continual exclamation. ‘Eh bien!’ says Mr Stone, ‘we’ll take a look at your facts, and see how they answer.’ Mr Stone’s former pamphlet on the same subject was a learned and an able one, but this is a thousand times more convincing, because there is no theorizing in it,—nothing but plain statements and incontrovertible deductions. He has ‘assailed their *facts*’ with a vengeance, and has succeeded in making it perfectly clear that there is no such thing as a well-established *fact* in the whole science. We do not speak rashly, nor do we speak partially.”

The Evening Post is equally eloquent. “Mr Stone is already known as the author of a learned and able work, entitled ‘Evidences against the System of Phrenology,’ which has now been before the public nearly a twelvemonth, although we believe it has not as yet met with any official reply. Mr Stone, the most vigorous and indefatigable opponent of their theories, has, in our opinion, been the most successful in illustrating the utter fallacy of their whole system. All is argument of the most convincing and conclusive kind. It is a rigid appeal to facts, to common sense, and to reason.

“Mr Stone has done his duty, and it only remains for the Phrenologists to do theirs. *How* they will be able to defend themselves, and *when*, we cannot guess, but at present they seem to be ‘taken all aback.’ Their philosophy (if it be a philosophy) has its foundation in nothing but credulity and wilful delusion,—it is a false theory,—a *petitio principii*,—which avoids the test of fact and experience,—a system of plausibility, which, when probed to the bottom, is found to be altogether so fallacious and superficial, that it is almost universally rejected. We are inclined to think that it has now got its last ‘quietus.’”—*Edinburgh Evening Post*, May 9.

No Phrenologist could desire an opponent more admirably qualified than Mr Stone to bring into contempt the cause of opposition, nor a series of criticisms better adapted than these to render the press ridiculous in the eyes of reflecting and enlightened men.

*Finally*, It is now thirty-three years since Dr Gall first announced his discovery of the functions of the brain, and it is just so many years since an emperor, his nobles, and the press of Europe, set themselves to subvert his conclusions, subdue his spirit, and laugh his doctrines to scorn; but



the doctrines have spread over Europe, and taken root in Asia, and America. It is an incredible assertion, then, to say that Dr Gall, Dr Spurzheim, or any other individuals, have set kingly power, priestly bigotry, and philosophic pride, at naught by the mere force of their talents, without a basis for their tenets in reason or in fact. The compliment to their genius implied in such a statement is too extravagant to be admitted even by their most enthusiastic admirers. Nothing but the force of truth could have carried them victorious through such hosts arrayed against them; and the same quiet but resistless power will ensure their final triumph over every obstacle that may be presented to their progress.

THE END.

A  
**REJOINDER**

TO THE

**ANSWER**

OF

**GEORGE COMBE, Esq.**

TO

“OBSERVATIONS ON THE PHRENOLOGICAL  
DEVELOPMENT OF BURKE, HARE, AND  
OTHER ATROCIOUS MURDERERS.”

By **THOMAS STONE, Esq.**

PRESIDENT OF THE ROYAL MEDICAL SOCIETY OF EDINBURGH.

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1829.



# THE HISTORY OF THE

AMERICAN

REPUBLIC

FROM THE FIRST SETTLEMENTS TO THE PRESENT TIME

BY

JOHN F. JOHNSON

A  
REJOINDER  
TO THE  
ANSWER OF GEORGE COMBE, Esq.

TO  
"OBSERVATIONS ON THE PHRENOLOGICAL DEVELOPMENT OF BURKE, HARE, AND OTHER ATROCIOUS MURDERERS."

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IN reply to the "Observations" which have lately been published on the "Phrenological Development of Burke, Hare, and other atrocious murderers," and in refutation of a very extensive series of facts which have been arrayed against the most fundamental principles of Phrenology, Mr Combe has just brought forward a Pamphlet, which he terms "*An Answer*;" and proceeding, as it does, from the pen of one who enjoys the pre-eminence of ranking at the head of the Phrenological School of Edinburgh, and who is, confessedly, the most responsible champion of its doctrines, I am entitled to consider that this production contains the most conclusive evidence he could adduce in their defence, and will afford the Public an additional opportunity of judging of the strength or weakness of the cause he advocates.

I. Mr Combe begins by stating, *page 4*, that "in Mr Stone's "Observations," the *breadth* of the organs is entirely



omitted, and his results are founded on measurements including *length* alone. This fact, although obvious to a Phrenologist, he *carefully conceals* from his *uninitiated readers*, and the acknowledgment of it only *transpires incidentally* towards the end of his pamphlet." I cannot help expressing surprise, that Mr Combe should, in the very beginning of this defence, condescend to make so illiberal and palpable a misrepresentation; for not only have I distinctly stated, that I have not given the *breadth* of these imaginary organs, but have explained the reason which compelled me to make that omission; *viz.* that "their boundaries are purely *ideal*, and depend, in *every* instance, on the *fancy* of the manipulator." This, the most important part of the statement he passes over in silence; and while he actually quotes the very passage wherein my acknowledgment is fully and fairly made, charges me with allowing it to transpire *only incidentally*, and with *carefully concealing* it from my "*uninitiated readers.*"

II. Mr Combe, at *page 5*, next objects to my having taken the measurement from *Destructiveness to Destructiveness*, and given this as its absolute size. He has then the inconsistency to quote *himself*, repeating the *same* mode of measurement *five* times at least in the same paragraph, *viz.* in Bellingham, Gordon, Raphael, and in a plurality of Hindoos. "In the head of Gordon, the murderer of the pedlar boy, *the measurement*," says he, "from *Destructiveness to Destructiveness* is  $5\frac{1}{8}$ ; and in the head of Raphael,  $5\frac{5}{8}$  inches; here the *absolute size* of the organ is greater in Raphael." Mr Combe, in this passage, represents *himself* as having taken these measurements in the same manner which I have adopted, and gives them as expressive of what *he* terms the "*absolute size*" of the organ; yet he now denounces this very mode of estimating its size as "absolutely absurd and unintelligible!"

III. At pages 6 and 7 of his "*Answer*," Mr Combe states, that "the *comparison* of the absolute size of an organ in *one man*, with its absolute size in *another*, is entirely irrelevant, and contrary to every Phrenological principle." In page 43 of his own System of Phrenology, he states, "the mask of Joseph Hume may be contrasted with that of Dr Chalmer's for *Ideality*, the former being  $5\frac{2}{8}$  inches in breadth, the latter  $6\frac{3}{8}$ . The cast of the skulls of Raphael and Haggart may be *compared* at the same part. The organ of *Constructiveness* in Raphael may be *compared* with the same organ in the New Holland skulls. *Destructiveness* in Bellingham may be *compared* with the same organ in the skulls of the Hindoos." I have given the measurement of the Destructiveness of Burke, Hare, and other atrocious murderers, in the same manner as Mr Combe here represents himself to have done in Bellingham, Raphael, Gordon, &c. and have compared it with the same dimension in various crania. We also took, by measurement, the *Ideality* of the brutal murderer Hare, and contrasted it with the same organ in a distinguished living Poet, whereby we found the Phrenological configuration, expressive of the Ideality of that miserable miscreant, was as superior to that of the Poet, as the same organ in Dr Chalmers in comparison with that of Joseph Hume. Here, and throughout my Induction, I have proceeded on the very principles above laid down; yet, in the next page of this "*Answer*," Mr Combe states, in contradiction to himself, that "there is no example, in any Phrenological work of authority, of such a preposterous and absurd principle of measurement as that which Mr Stone chooses to adopt."

IV. My not having taken the breadth of the several organs, Mr Combe endeavours to exaggerate into an insuperable objection; but the whole amount of his reasoning, were it correct, would tend only to overthrow, by an additional and very glaring discrepancy, his System; for if the



absolute size of an organ cannot be obtained without previously having ascertained its breadth, and if this dimension cannot possibly be taken, then the sizes of the pretended organs are not discoverable, and, consequently, they can never be made the subjects of any sort of comparison. But I question whether Mr Combe's anxiety to give this argument an importance to which it is not entitled, does not induce him to overlook the primary principles of his own theory. Every organ is represented as being an inverted *cone*, with its *apex* in the medulla, and its *base* at the surface of the brain. It is evident, therefore, that the breadth of an organ must augment with its distance from the medulla, as, in increasing the length of a cone from its *apex*, we must necessarily increase its breadth. Mr Combe, perhaps, is not aware, that if the increased area of these organs representing cones were multiplied into  $\frac{1}{3}$  of the length, it would give their solidity, and thus have merely the effect of augmenting the numerical differences between the expressions of the size of any one organ compared with another; and were their solidity, therefore, thus brought out, the evidence already adduced would only be rendered much more palpable.

But this is not all. Mr Combe's expatiation on the varying breadth, or peripheral expansion of these organs, manifests more than an oversight of Physiological principles; for if, as he himself must be aware, he cannot point out the limits of any two contiguous organs, he has no right, from the inspirations of his own fancy, to presume that the same organ will exhibit, even in proportion to the whole encephalon, such continual variations in breadth, more especially as the limits of their various expansions cannot, on any fixed principles, be demonstrated; and still less has he a right to infer, that masses so pertinacious of their forms, as nervous matter is known to be, can ever encroach upon each other. Let him examine the curious and intimately aggregated mass of the

brain, and the twelve nerves—"organs," as Dr Spurzheim calls them—at its base, which may for a long series of years have been pressed against the solid bone, yet, although aided by blood and other effused matter, he will not find one particle of nervous substance displaced, or even encroached on by the exercise of these organs, although the olfactory nerve may have belonged to a Perfumer, the optic to an Astronomer, the auditory to a Musician, whose daily employment and pleasure it might have been to employ them to the utmost. It is, on these principles, preposterous to suppose that one organ can encroach on the limits of another; besides, in the very passage he quotes from his own System of Phrenology, he states, that "large size may consist in *length*, or *breadth*, or *in both*." Evidently admitting *either* of them to be correct.

V. Mr Combe, at page 6, in illustration of his positions, introduces an illustration very happily calculated to expose their absurdity; as, if it were found that the little finger of A were less in proportion to the hand of A, than the average little finger of the human race is to the average hand of that majority, we should be perfectly correct in pronouncing the little finger of A less than the average. Mr Combe states, that "Mr Stone would measure the length of A's little finger, omitting the breadth, and call this its absolute size." But no! he would take the breadth, were it possible to do so; but if the fingers sprouted up in the form of cones, with their bases uppermost, as is represented to be the case with the pretended Phrenological organs, he would, in that case, certainly take their length, and refer Mr Combe again to any elementary book on Mathematics, to discover, that, in rising from its *apex*, the base of a cone must increase with its length. The ancient Pythagoras permitted no one to enter his Academy without a knowledge of Geometry; but the Pythagoras of Phrenology excludes its most elementary principles, and will not, it would seem, al-



low them to be introduced in his School: into which, as into the Palace of Sleep, nothing is permitted to enter but dreams and stupor. In Mr Combe's illustration of the fingers of A, he has introduced a false analogy,—has added false circumstances,—has reasoned on them falsely, and brought the whole to a climax in very false English; for what does he mean by "*overturning a proposition in toto?*"

VI. Mr Combe, at *page 6*, line 33, distinctly states, that "*giving the 'absolute size' of an organ is a piece of pure and gratuitous absurdity.*" I entirely agree with him in this unexpected confession; and, in adopting the expression, did so simply because it was introduced on his *own* authority; and I have used it to express exactly the *same* meaning as that which *he* assigned to it. We must, in refuting every theory, as he must be aware, use the conventional terms connected with it by the theorists themselves, however vague and unphilosophical they may be, when otherwise more properly considered.

VII. At *page 8*, we are informed that a Phrenologist only measures "the *length* and *breadth* of the head, to let it be known whether he is speaking of a *large* head or a *small* one." But I have already shewn that they do *more* than this, and that they measure individual organs, terming the *dimensions* given, their "*absolute size.*" The callipers, it is very obvious, having cruelly and unexpectedly turned out a suicidal instrument, Mr Combe, in relinquishing them, must assign some reason for having used them, hence he hurries himself from contradiction to contradiction. At *page 6*, he declares, that "*giving the absolute size of an organ is a piece of pure and gratuitous absurdity;*" at *page 5*, states, that he has himself been guilty of this absurdity repeatedly. At *page 8*, he states that the Phrenologist only measures a head to know whether it be large or small; at *page 6*, informs us, that organs are *not* to

be judged of in relation to the size of the head, but simply in relation to the size of each other ; although we are previously given to understand that, taking the absolute size of each, which could alone enable us to institute such a comparison, is a "gratuitous absurdity." At page 5, he informs us the measurement from Destructiveness to Destructiveness does not give the absolute size of that organ, and immediately quotes himself, applying that very term to the same measurement.

VIII. At page 7, Mr Combe observes, that "*Mr Stone compares dimensions altogether dissimilar ; and to hold up such an investigation, as scientific, is to set common sense and reason at defiance.*" From this asseveration, it would appear *necessary* to remind Mr Combe, that every proportion involves at least *three*—but generally *four*—terms ; and *two* of these might be of one kind, and two might be of another. Thus, if *two* yards of cloth cost 4s. 6d., what will 16 yards cost ? Answer, £1, 16s. As 2 yards : 4s. 6d. :: 16 yards : £1, 16s.\* Now, it is clear that the *money* and the *cloth* are things as dissimilar, as a number expressing one dimension, and another expressing a multiple of three dimensions. I never dreamed of comparing dissimilar dimensions with each other in one skull, but each of them with its similar dimensions in different skulls ; but, as this would have been useless without some measure of the absolute size of these skulls, I have given their solid contents whenever I had that in my power. In direct opposition, therefore, to Mr Combe's avowal, it is the general practice to arrange, as he will find by the elementary rules of proportion, dissimilar things, according to their incidental, though not homogeneous, relation, and things of a dissimilar nature are every day so arranged.

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\* See Rule for *Simple Proportion* in Gray's "*Introduction to Arithmetic*," p. 43.



It is really irksome to be under the necessity of illustrating to any leader or professor of a *Science* such obvious truisms; but let Mr Combe look into his interest-tables, and tell us what natural similarity there is between the column of days and that of money opposite; or, as an additional illustration, I would refer him to the first proposition of the VI. Book of Euclid, where he will find it demonstrated, that triangles having the same altitude, are proportional to their bases, although the former are areas, and the latter merely straight lines. Mr Combe having escaped so many daggers, should carefully avoid encountering the dangers of the rule of three, as he will find the common principles of arithmetic as stubbornly divested of every thing like imagination, as a pair of callipers or a foot rule, which, being used on mathematical principles, seem wisely rejected by those professors who pretend seriously to maintain a doctrine of proportions without a scale of measurement, and to determine the nicest variations of size without even a standard of comparison.

IX. At page 9, Mr Combe appears to think he has discovered an inconsistency in my calculations, which he states "*thrusts itself on the reader,*" and is at once a "*reductio ad absurdum.*" He then adds together the figures, which I have given as expressive of the *ratios* of the several organs to the mean diameter of the head, and concludes with avowing that I have made a few *organs* larger in their size than the whole head. The error is *entirely* Mr Combe's. I have first given the absolute dimensions of the several organs; then the mean diameter of the head; and, finally, their several proportions to that mean diameter. Thus, the mean diameter of Hare's head is 13.8 inches. The proportion of his Destructiveness to that diameter, as 1 to 2.319; of his Benevolence, as 1 to 2.555; of his Conscientiousness, as 1 to 3. No person, surely, would ever think of adding these figures together, which are expressive of mere

*ratios*, for the purpose of ascertaining the absolute size of the whole head. The idea is ludicrous. Supposing, by way of a very simple illustration, a line of 20 inches were divided in three unequal lengths. The first being a distance from the end of 10 inches, the second of 6, the third of 4. The first division would be, in proportion to the length of the line, as 1 to 2; the second, as 1 to 3.33; the third, as 1 to 5. Now the adding together these figures, which are expressive of mere ratios, would not give the length of the whole line, nor would the proportions of the organs to the *mean diameter* of the head ever give the absolute size of the whole head.

We are clearly justified in taking the mean diameter of any head as the standard by which to estimate the proportions of its own various dimensions; and the veriest tyro must perceive, that the number alone of the 33 Phrenological dimensions, each of which has to be compared with that diameter, will, taking the mere units of their proportions, exceed the diameter of the head of the wisest Pericles that ever breathed. The "*reductio ad absurdum*" must, therefore, recoil on Mr Combe himself; for the idea of adding together figures that are expressive of mere *ratios*, and confounding them with figures that are expressive of *quantities*,—the adding together a series of *proportions* with a notion that the sum total of them will give the size of the *standard* by which they are compared, must reflect a severe satire on the reasonings of *any* scientific controversialist.

Here also I may notice, that, in *constructing* this paragraph, which actually does not occur in any part of my book as *here* presented, a letter is introduced that is elsewhere employed for quotation; and, by Mr Combe's running his own calculations into mine, suppressing only the inverted commas at line 3 from the bottom of the page, and not, *as in other places*, changing the letter, it would appear as if this erroneous calculation had been extracted from my



observations, instead of being, as it truly is, a most inexcusable blunder of his own.

X. At *pages 10, 11, 12*, observations are introduced on the skull of Pepe, vindicating the Secretary of the Phrenological Society of Washington from the charge of having taken the measurement of the Destructiveness erroneously, and distinctly averring, that the skull of the Pepe, in the Edinburgh Museum, did not belong to that Pepe whose atrocities are mentioned in the Phrenological Journal. Allowing this to be established, it remains for me to shew the grounds on which I made that statement. *1st*, These two murderers were known by the same name. *2d*, They were natives of the same country. *3d*, They were both engaged as Pirates in the same abominable career. *4th*, Their atrocities were committed in the same seas, and in the same latitude. *5th*, Their crimes were of the same description. *6th*, They must, according to Mr Combe's own statement, have been contemporaries. Mr Combe states, that the discrepancy between the Washington measurement and my own, ought to have led me to measure the cast in the Phrenological Hall; but I have already shewn, both in my former and present pamphlet, that, in consequence of the phrenological casts of hanged persons being taken over the distended integuments, they are utterly *worthless*; and Mr Combe, even in his "*Answer*," has not ventured to deny this statement. If he should ever presume to do so, he will find, as an illustration of its truth, that the Destructiveness of Burke *confessedly* measures more on the *cast* than it did on the *head* during life,\* which must also have been the case with *all* other executed murderers, although the acknowledgment has never before transpired. I should never dream of visiting the Phrenological Hall for the purpose of measuring casts. Be-

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\* Phrenological Journal, vol. v. 559.

sides, in the case of Pepe, I never even suspected that such a *series* of coincidences was likely to attend the career of *two* such abandoned villains; and I may inform Mr Combe, that, on being given to understand that some such mistake might exist, I wrote immediately to Professor Graham, *before* the appearance of his pamphlet, expressing my anxiety to obtain every information on the subject, and stating that, if in error, I should take an early opportunity of correcting it. I enter into these particulars, because I know it is the usual tactics of Phrenologists, if possible, to direct the attention of the Public from the points at issue to personal disputes; and for that reason they invariably endeavour, instead of fairly defending their doctrines, to impugn the characters of their opponents. But, in the present instance, how is Phrenology affected by the discovery of there having been *two* monsters of the name of Pepe?

The atrocities of the one recorded in the Phrenological Journal are of the most frightful description; yet, according to the measurement of the skull of this Pepe, supplied by the Phrenological Secretary himself, the distance from Destructiveness to Destructiveness, which Mr Combe himself, in the case of Bellingham, Gordon, Raphael, &c. gives as expressing the "*absolute size*" of that organ, measures only 5.4 inches, which is below the average of the same dimension taken in *both* the extensive series of crania to which I have referred.

Let us next look to the other Pepe. I am informed by Professor Graham, that this man was certainly a very atrocious and cruel murderer. He was, with other pirates, infesting the Isle of Pines when the learned Professor's brother was endeavouring, by order of the Government, to extirpate them. A boat's crew of Captain Graham's fell into their hands, and, under the direction of Pepe, every person on board was murdered. The murderer Pepe bore the same character as his namesake; and this skull, respect-



ing the identity of which there cannot be a doubt, is in the Edinburgh Museum. Dr Spurzheim, when in Edinburgh, examined it; and, in giving his character, was in some particulars *right*, in others *wrong*, as he represented him to have been a man who, from his want of intellectual ability, was scarcely responsible; whereas he was known to have been exceedingly shrewd and clever. Now the skull of this murderer, which has been repeatedly inspected, exhibits a remarkable deficiency of the pretended organ of Destructiveness. My attention was directed to it by Sir William Hamilton, who first noticed that its extreme narrowness from Destructiveness to Destructiveness constitutes its *characteristic* peculiarity; and I beg to repeat, that so triumphant a case is this against the Phrenological *hypothesis*, that I reiterate the challenge for any Phrenologist to produce a cranium of the same size, that will measure so narrow from Destructiveness to Destructiveness as does the skull of this atrocious and bloody murderer. By the present *éclaircissement*, therefore, we find, that, instead of *one* Antiphrenological Pepe, there are now *two* Antiphrenological Pepes.

XI. Mr Combe, as an illustration of the "*gross mistakes*," and as "*a specimen of Mr Stone's facts and observations*," refers to the Phrenological Journal, vol. v. p. 264, where the reader will find a correspondence, which I should have thought Mr Combe, for his own sake, would have been anxious to bury in oblivion. In the celebrated controversy with Sir William Hamilton, touching the extent of the frontal sinuses, Mr Combe announced to the Public, that he had, at one of his lectures, refuted the statements of Sir William, not only by the "*whole open skulls in the Phrenological Museum*," but by "*all the open skulls*" in the "*collection*" of a lecturer on Surgery. This statement was put forth in highly coloured and imposing

terms, Mr Combe giving himself credit for "*obviating the charge of selection*;"—producing the "*whole collection*" from a "*private Museum*;" leaving "*no room for the intentional omission of any*," &c.; whereas, on inquiring into the extent of this "*collection*" referred to with so much apparent candour, these specimens which Mr Combe stated had triumphantly refuted the *seventy* or *eighty* crania exhibited by Sir William Hamilton; this body of evidence which he adduced, alleging that he did so, because the "*stronger evidence was to be preferred to the weaker*," proved, even on his own shewing, to amount, at the very most, only to *eight* skulls.\* Mr Stone, on visiting the Museum whence these were taken, having been shewn only *three*, and informed that they were all that were exhibited at Mr Combe's lecture, described that to have been their number; but as they afterwards were made out to be *eight*, Mr Stone wrote a letter in explanation, which was then considered satisfactory; and yet, such is the wretched state of the Phrenological cause, that Mr Combe, instead of answering

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\* Of these *eight*, *one* was the skull of a *fœtus*, *another* that of an *impuberal* child, and in *two* the frontal sinuses, although present, were *not opened* at all; hence *four* only of the skulls bore on the question; so much for this "*collection of open crania*."

In publishing the correspondence in the Phrenological Journal, there is also introduced a letter from Mr Syme, which, I must take this opportunity of observing, contains several mis-statements. It was obviously written for the purpose of making it appear that I had made the inquiry carelessly; which was not the case. I did not think it necessary to enter into any *public* controversy on this subject, as the question at issue was not what transpired between that gentleman and myself, but what was the number of open crania that constituted the "*collection*" exhibited at the lecture by Mr Combe, which the greater portion of the public, of course, knew nothing of, and respecting which they were, therefore, liable to be easily deceived.

It has also been stated, that Sir William Hamilton's *seventy* or *eighty* crania were not open. *This is untrue*. Those that were at that time not laid open, by the frontal plate being lifted up, were so bored as to admit of a probe being passed in to ascertain the extent of the sinus, which, having been thus carefully ascertained, was marked on the outside of the skull.



fairly the facts now adduced against it, finds himself under the necessity of attempting to impugn the veracity of his opponent by a mysterious allusion to a past controversy, concerning which he ought to have felt many cogent reasons for remaining silent. He cannot have forgotten the sentiments then expressed by the Public Press; and I am compelled, therefore, in vindication of myself, to remind him of the following passage, which appeared at that time in one of the principal Newspapers in Edinburgh:—“ Mr Stone’s *letter* appears to us very *conclusive*. The error into which *he had been led* regarding the *number* of the skulls is very *unimportant*, even supposing that all the eight had borne directly on the question. When Mr Combe stated that the skulls he examined, *taking care not to mention that their precise number was eight*, afforded stronger evidence in his favour than the *seventy or eighty* skulls he knew Sir William Hamilton had adduced against him, he unquestionably *misled* the Public, not to use a *stronger* term.”

XII. Mr Combe having, in this professed “*Answer to the Observations on Burke, Hare,*” &c. proceeded thus far, without noticing a fact adduced respecting either of these murderers, devotes the remaining pages of his reply to an attack on the Newspaper Press, opposing against their united opinion *his* individual judgment. “If Phrenology,” says he, “was refuted by Dr Gordon, why did they laud Dr Roget for demolishing it? Why did they praise Dr Barclay so extravagantly, for subverting what was already overturned? If Dr Barclay was a fatal enemy, why did they extol Mr Jeffrey to the skies?” &c. These periodicals never, I believe, lauded Dr Gordon, Dr Roget, nor yet Dr Barclay; and, had they done so, they would only have been doing their duty by recording the public sentiments of the day. Mr Combe next proceeds to state the strength

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† Observer, May 6, 1828.

which Phrenology is gradually acquiring, by the conversion of the Newspaper Press of Edinburgh. "The older papers," he observes, "have, of late, become less zealous in the cause of opposition;" yet, of all these periodicals in Edinburgh, he can only select *two* that can give him the slightest consolation.—One is the "*Weekly Journal*," the editor of which, Mr Combe remarks, "appears fairly to have given up his hostility." If Mr Combe will consult the number of this paper published only a few days ago,\* he will find a temperate and ably written article *against* Phrenology, which, I am satisfied, he would find it difficult to answer. The other Newspaper is the "*Scotsman*." Now, the name of the working editor of that journal stands honestly on the paper itself—his style is as well known as that of Samuel Johnson—and, in a late number, he declared himself *not* a phrenologist. The name of the other conductor, which is no secret, stands in the Edinburgh Almanack for the present year, directly over that of Mr Combe, in the list of *Vice-Presidents* of the *Phrenological Society*; but this gentleman has notwithstanding never ventured to assert in that journal that he is a phrenologist. Mr Combe is not more fortunate in his reference to Blackwood's Magazine. "Blackwood's Magazine," says he, with much confidence, "from being a violent opponent has become *neuter*." If he will refer to the number for the *present* month, he will find the celebrated *Odoherly*, in the "*Noctes*," exclaiming, "just turn to that page in which Bonaparte *demolishes* Spurzheim. Those three or four sentences are worth all that has yet been written on the subject. Let Mr Combe answer them, *if* he can"† The Newspapers that oppose the system, Mr Combe then styles "*junior publications*;" but he must be aware that there is really not one independent Editor, of either Magazine or Newspaper, in this city, who professes to have any faith in the phreno-

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\* No. for Wednesday, May 20, 1829.

† Blackwood's Magazine for May 1829.—*Noctes Ambrosianæ*, xliv. 798.



logical hypothesis, notwithstanding he has been expounding it annually for so long a period, and that every exertion is made, both privately and publicly, to advance the interests of the cause.

XIII. Mr Combe states, that "Mr Stone's prior pamphlet, his boasted "*Evidences against Phrenology*," has been dissected by an *able* writer in the London Medical and Surgical Journal," and wonders the Newspaper Editors of this city were not aware of the circumstance. Mr Combe thus appears to sanction the statements of that writer; but will *he* become responsible for their insinuated veracity? Will *he* reiterate, on his *own* authority, the *same* accusations of "misrepresentation," "erroneous quotation," "glaring interpolation?" &c. If so, I will answer him; but I will not, for a moment, think of noticing a scurrilous *anonymous* production, wherein I recognize neither the style of a gentleman nor the information of a scholar.

I have now followed Mr Combe through all his objections to the "Observations on the Phrenological Development of Burke and Hare;" and find, that, instead of this pamphlet being "*An Answer*," as its title, with its ludicrously applied motto would signify, there still remains unquestioned an entire series of facts, affecting the most fundamental principles of Phrenology, which, from the silence of Mr Combe, must now be considered incontrovertible. I have shewn the objection he pretends to urge, *in limine*, against my mode of taking measurements is untenable;—I have proved that he himself adopted, on his own confession, the same method—and that it is consistent with the doctrines of Phrenology. The evidence, on both sides, therefore, being, as far as I am concerned, now before the Public, I leave all, who are not tired of the subject, to pronounce an impartial judgment.

Edinburgh, 11, Castle Street.  
30th May 1829.

## ADDENDA.

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IN the preceding Rejoinder, it may be alleged, that I have introduced much that has no immediate connection with the facts detailed in my "Observations;" and my apology must be simply, that I felt desirous of following Mr Combe, step by step, through the various stages of his "*Answer*." In the form of Addenda, I now propose sub-joining a few of the more important counter-Phrenological propositions, which have been deduced from evidence, that has either been passed over in silence, or not met with any fair or conclusive refutation.

I. By comparing the crania of eighteen murderers with two extensive series of crania, it has been proved, that the crania of such criminals are not characterized by any superior development in the region of Destructiveness; and that, instead of being broader, they are frequently much narrower than crania in general,—Proved by the measurement from Destructiveness to Destructiveness in the *two* Pepes, and the same measurement in all the murderers included in Table VI. of the "Observations," having been compared with the two series of crania referred to as standards of comparison. \*

II. The superior part of the cranium, to which region Phrenologists have referred the organs of the moral sentiments, is frequently found higher and better developed in the crania of murderers than in crania in general,—Proved by the distance from the meatus to the organ of Benevolence, in the skulls of Burke, Haggart, Balfour, Cockburn, Macmillan, Collins, Kerr, Divan, &c. having been com-

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\* Obs. pages 9, 10, 37, 39, &c.



pared with the same dimension in the extensive series of crania alluded to in the Edinburgh Museum. \*

III. The Cerebellum of Burke, in contradiction to his acknowledged character, was below the average,—Proved by its weight having been compared with the weight of the cerebella in 44 subjects, male and female, adult and impuberal; also, by the size of the cerebellic cavities in his cranium having been compared with the same in 51 crania, including 33 adult male,—32 adult female,—6 impuberal female. †

IV. Notwithstanding the disease under which Burke had laboured for many years, ‡ neither lobe of the cerebellum was diminished in size.

V. The crania of murderers have not been found to exhibit any deficiency of anterior development, and sometimes, in contrast with other crania, the anterior region is even fuller and better developed in such criminals than in crania in general,—Proved by comparing the skulls of Haggart, Glen, Balfour, Gordon, Collins, &c. with the crania in the Edinburgh Museum, and with the cranium of the late celebrated Dr David Gregory. ||

VI. The posterior development, or quantity of brain behind the ear, to which region Phrenologists refer the animal propensities, has not been found to exhibit any remarkable preponderance in the crania of murderers,—Proved by the evidence adduced in confirmation of Proposition V. §

VII. The region of the head to which the supposed organ of Acquisitiveness is referred, has not been found broader in notorious thieves than in individuals of exemplary

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\* Obs. pages 44, 45.    † Ibid, p. 16, 17.    ‡ Ibid, p. 18, 19.  
 || Ibid, p. 46, 47, 49, 50.    § Ibid, p. 50, 51.

character ; and sometimes even narrower,—Proved by the distance from Acquisitiveness to Acquisitiveness having been taken in twenty-two thieves, and compared with the same dimension in various persons, English, Scotch, and Irish, each class of individuals having been taken without any selection. \*

VIII. By a comparison of the heads of the same individuals, thieves are frequently found to possess that region of the head, to which the organ of Conscientiousness is ascribed, more highly developed than individuals of exemplary character. †

The evidence which has been already published, and which irrefragably establishes these several counter-Phrenological propositions, cannot be subverted by any evasive quibblings respecting the equivocal breadth or length of particular organs. The dimensions of every cranium may, with the assistance of the callipers, be fairly taken in every direction ; and if Destructiveness be broader than is usual, or Benevolence higher, such configuration must affect the measurement, if taken on the same principle in the two subjects of comparison. Having, in my “ Observations,” restricted myself exclusively to evidence that is of the most tangible nature, I will not enter into any mere verbal controversy on the subject. I have laid before the Public a very extensive series of facts, and not *one* of these has Mr Combe even attempted to answer. Let any Phrenologist meet them fairly, and those who feel interested will rest satisfied,—but, until that period arrive, I take my leave of Phrenology.

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\* Obs. p. 54, 55.    † Ibid.

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#### ERRATUM.

At pages 10 and 11, for “ *Mean* diameter,” throughout the paragraph, read “ *aggregate* diameter of the head,” as explained in “ Observations,” page 22, to signify the sum of the longitudinal and transverse diameters, or double the *mean* diameter.





# LETTER

ON

THE PREJUDICES OF THE GREAT IN SCIENCE  
AND PHILOSOPHY

AGAINST

## PHRENOLOGY;

ADDRESSED TO

THE EDITOR

OF

THE EDINBURGH WEEKLY JOURNAL.

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“ All the arguments that can be used will be as little able to prevail as the  
“ wind did with the traveller to part with his cloak, which he held only the  
“ faster.”—LOCKE.

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BY GEORGE COMBE.

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EDINBURGH :

JOHN ANDERSON, JUN., 55, NORTH BRIDGE STREET;  
AND SIMPKIN & MARSHALL, LONDON.

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1829.





## LETTER

TO THE

EDITOR OF THE EDINBURGH WEEKLY JOURNAL.

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SIR,

You may be surprised why I should have selected your notice of Phrenology as the subject of a reply, and in such a tone as is taken in this Letter. There are three reasons,—First, In a short answer to Mr Stone's elaborate production, I had ventured to describe you as having relinquished your hostility to Phrenology, at a time when, as it oddly happened, you were about to resume it. Secondly, Your criticism affords a good opportunity of addressing some observations to the public, for whom this Letter is principally intended. Thirdly, I have much respect for your character, and you are generally understood to represent, on many subjects, the sentiments of the "greatest" literary character of the age. The common attacks of vanity and petulance sink into oblivion as rapidly as they are given forth; but when you speak gravely and at length on a solemn topic, you, from your known candour, are listened to with merited attention. This Letter, therefore, is a tribute of sincere esteem; and while I scruple not to "utter my thoughts" with the freedom of one who knows that he is addressing an enlightened and candid mind, I trust that no expression will follow which even malice itself shall be able to construe into personal hostility or disrespect; nor am I without hope of making a favourable impression even upon yourself.

The errors which it appears to me you have committed



shall be frankly exposed ; but it is proper to state at the very threshold, that I attach no demerit to you for treating Phrenology with habitual neglect. You have your own pursuits, which occupy your time, as you naturally conceive, to far greater advantage ; and, besides, I am not so extravagant as to expect that all the world should study Phrenology any more than that they should become profound mathematicians, chemists, or anatomists. I blame no person for avoiding this inquiry, or treating it lightly. Individuals have an undoubted right to please their own tastes in their studies ; and while they confine themselves to simple neglect, they do not suffer any diminution even in my esteem. There is a positive pleasure, and great practical advantage, in being acquainted with Phrenology, the want of which is the natural, and therefore a sufficient, penalty incurred by those who refuse to listen to its pretensions. But you pronounce judgment on what the Phrenologists have done, as if you knew all that they had accomplished. Placed in a situation of authority, and invested with some influence over public opinion, you first announce what is most true, that “ you have never studied the subject very deeply ;” and then, forgetting this statement, you, in a few sentences afterwards, denounce the evidence as insufficient, as if you were acquainted with its nature and extent. This affords just matter of complaint ; because you give rise to erroneous impressions, and, so far as your authority goes, foster prejudice and avert inquiry.

That you have not studied very deeply is farther proved by your falling into the snare which Mr Stone has laid for all Anti-Phrenologists. You have been captivated by his “ Observations,” which, nevertheless, are so palpably ridiculous, that no man who understands the first elements of Phrenology, who has seriously examined twenty casts or skulls in his life, or who has used his eyes in comparing Mr Stone’s statements with nature, could have been deceived by them. Of all this I shall very shortly satisfy yourself. It is easy for Mr Stone to mistify the public mind with measurements,

and decimals, and assertions without foundation ; but the eye and the hand will, in five minutes, refute a volume of such lucubrations. Now, I affirm without fear of contradiction, and I am ready to demonstrate to your own senses, whenever you shall intimate a desire to be informed, that there is a great and palpable difference between the heads of executed criminals and those of virtuous men, and between the heads of Burke and Hare in particular and those of men of opposite dispositions ; and that these differences extend not to inappreciable and evanescent quantities, but to palpable bulk in given directions, which cannot puzzle any inquirer who is willing to perceive length, breadth, and thickness. All this evidence was patent in the Phrenological Hall to you and every one else whom Mr Stone addressed ; and it was impossible to compare his statements with nature without perceiving their fallacy. But you did not consider it necessary to take this trouble. You were quite ready to believe self-evident absurdities *against* Phrenology ; for example, that Hare's three organs of Destructiveness, Benevolence, and Conscientiousness, were larger than his whole head. This nonsense, from the language of praise which you have employed, you have credited on Mr Stone's bare assertion ; while you have not deigned to employ your own senses, lest they should convince you that Phrenology is true.

Even at this early stage I must remark farther, that you have contented yourself with adducing, in a vague and feeble manner, but yet as triumphant, objections which, in the phrenological works, have not only been stated more forcibly than by yourself, but also been examined and answered. You and others, it is possible, may think the answers not sufficient ; but, until you had fully considered and obviated them, you were not at liberty to assume an air of victory, and re-state the objections as if they had been entirely new. This is a topic which will be recurred to.

No multitude of facts, and no force of evidence, can possibly operate on those who pursue such a course,—who shut their eyes and close their understandings against conviction ;



and this is what the “great in science and philosophy” and their followers have done in all ages, and are now doing. The great men of Harvey’s day died before the circulation of the blood was admitted to be true ; and so must the great men of this generation expire before the functions of the brain shall be recognized as ascertained.

On the subject of the evidence of Phrenology it is interesting to remark, that regarding one fact your means of information were complete. You sent your own son to a Phrenologist, who examined his head, and gave you a written sketch of his natural talents and dispositions. Now, how did this experiment tell in regard to the truth of the doctrines ? You are known to possess a fair and candid mind,—so much of Conscientiousness, in short, that you are incapable knowingly of withholding justice even from a Phrenologist ; and, accordingly, the imperative calls of truth have, in this instance, fairly overcome the inveterate prejudices which, on other points of this controversy, have obscured your naturally equitable judgment. You say,—“ A gentleman, who was  
 “ no believer in Phrenology, but had yet been startled from time to  
 “ time with well-authenticated instances appearing to substantiate its pretensions, sent his son, a boy betwixt eleven and  
 “ twelve, to a Phrenologist of skill, in order that his cranium  
 “ might be examined, and its developments compared with his  
 “ actual disposition and character. The father was of opinion,  
 “ that this would go far to decide the value of Phrenology, at  
 “ least to his own conviction, the boy’s character being of a singularly mixed nature, the most distinct or rather opposite  
 “ qualities appearing to thrive in it with equal strength and  
 “ luxuriance, while they were in no respect indicated by his  
 “ countenance, which, though rather handsome, was any thing  
 “ but strongly marked. It was the common-place ruddy countenance of a pretty boy, which was calculated to throw no  
 “ light whatever upon either the talents or the moral qualities  
 “ of the subject ; and it should be premised, that the phrenological artist was altogether ignorant of these. The result was  
 “ as follows :—A paper was returned to the father, shortly after  
 “ the examination, of a nature not extremely flattering, nor altogether discouraging. Shortly afterwards the boy was invited  
 “ to reside for some time in a family, the heads of which are distinguished for their intellectual attainments ; and by whom the  
 “ most pointed attention was paid to the investigation of his

“ character, and the cultivation of his mind. A report was periodically made to the father of his son’s progress in all respects ; and in a short time it was distinctly ascertained, that every quality, bad and good, as well as most of his tastes, predilections, and partialities—some of which were *bizarre* enough—had been exhibited exactly, in manner and degree, as they had been described and anticipated by the Phrenologist. We are aware that there is little in this account to distinguish it from many others that are stated to occur in phrenological investigations. But, from the general tenor of this article, it will be seen that we are no converts to Phrenology ; and therefore the above statement has a title to be received with implicit confidence in its truth, however it may be accounted for, or whatever weight may be given to it.”

With this fact falling within the scope of your own experience, you, nevertheless, observe,—“ We are inclined to look with some suspicion on the very rapid growth and sudden maturity of Phrenology. Every other science has had a long infancy and very slow growth. A mushroom springs up in a night, and dies in a day or two ; the growth of an oak is hardly perceptible in a course of years, and it stands, in strength and vigour, for ages. Such seems to be the difference between the growth and duration of spurious and real science. With these views of the present state of Phrenology, (whatever its future state may be,) it appears to us to be the height of infatuation to take it as a guide in the most important concerns of human life. If it is not positively an *ignis fatuus*—a will-o’-the-wisp—(which there is some reason to apprehend is its true character), it is at all events a glimmering, feeble, and uncertain light,—a mere darkness visible. And yet we see affectionate fathers and fond mothers sporting with the destinies of their children, by *educating* them according to a set of principles, which, for any thing yet proved to the contrary, may be as fantastic as those of alchemy or animal magnetism.”

The observation, that “ every other science has had a long infancy, and very slow growth,” is absolutely contradicted by the history of philosophical discovery. The doctrine of the circulation of the blood was as completely demonstrated by Harvey as it is at the present day. It was matured by himself. In like manner, Newton’s theory of planetary motion was almost complete as it emanated from his own mind. No principle which he announced as established has ever been overturned, and the additions which have since been made to his discoveries are extremely unimportant. La Place and some



other astronomers have explained phenomena which he left in the condition of anomalies ; but they have done so by bringing them fairly within the scope of his philosophy, and not by correcting errors which he had committed. Sciences of observation, such as chemistry, natural history, and geology, in which the *objects* are numerous and complicated, grow slowly by successive additions from generation after generation ; but all sciences depending on a single great principle have advanced to maturity with rapidity, whenever that principle has been fairly discovered. Now, Phrenology belongs to this class. The grand principles are, that the brain is a congeries of organs manifesting a plurality of faculties, and that the size of an organ, other conditions being equal, is an index to the power of the faculty. This assertion may be proved or refuted in a week by an active and acute observer. When in Dublin, I visited the asylum for incurable pauper lunatics, and on pointing out nearly twenty idiots, whose brains were extremely deficient in size, but in whom no trace of diseased structure appeared, the individuals who accompanied me acknowledged that it was not necessary to go farther to discover the effects of size in the brain on the mental manifestations. The brain, therefore, is neither so large, the organs so complicated, nor are opportunities for observation so few, as to render it either impossible or difficult for a man of a powerful and active mind, *who has discovered the true method of studying its functions*, (for a great deal depends on this,) to establish in thirty years the grand outline of its physiology. Phrenologists do not pretend that their science is perfect ; but you insinuate that it has not even a foundation, and thereby deprive Dr Gall of the honour that is unquestionably his, and represent the subject as an illusion.

The same consideration affords another answer to your severe remarks against “ affectionate fathers and fond mothers sporting with the destinies of their children, by *educating* them according to phrenological principles.” What should we think now of a critic who should condemn Har-

vey's first convert for having treated his patients on principles founded on the reality of the circulation of the blood? A natural truth is a truth at all times, whether recognized by men's intellects, obscured by their ignorance, or opposed and denied by their prejudices. The blood circulated in the arteries of the very men who employed the vigour resulting from that circulation in denying its existence; and the brain is performing its functions in yourself and the other individuals who most zealously decry them. From the moment when a natural truth is discovered it becomes available; and it is a weak mind which perceives that nature gives forth the fountain, and which yet fears to embark on the stream. It would not be wise in you, who have "never studied the subject very deeply," to set about educating your children on your own crude and mistaken impressions of what Phrenology really is; but it is equally preposterous in you to stigmatize as visionaries the "affectionate fathers and fond mothers" *who have studied* Phrenology deeply, recognized its truth, and experienced its practical utility in education, for applying it in that manner, merely because it has not yet received the superscription of the great. On the subject of education, the "great in science and philosophy" may shade their brows, and stand mute before the world. The day is not far distant when the meagerness of their achievements in this department of usefulness will be duly estimated; meantime the fact is certain, that there are fathers and mothers, whose attainments and good sense will bear an advantageous comparison with those of the opponents of Phrenology, who for years have educated their children by the lights of this science, and who already have experienced a great reward in its beneficial effects.

And, after all, what do you conceive a phrenological education to mean? In the very instance you quote, you show that a Phrenologist has given a most particular and accurate analysis of the mental character of your son. Now, is this of no utility in education? Suppose the Phrenologists who em-



ploy their lights in education to be equally successful in discovering the characters of their own children, ought they to disregard this knowledge, because it has been obtained through the medium of Phrenology? The Phrenologist, having discovered the talents and dispositions of his children, endeavours to curb the passions that are too powerful, to foster the principles that are too weak, to direct each faculty to its proper objects, and, above all, to inculcate practically the doctrine that intelligence and virtue, love to God, shown in obedience to his laws, and charity to man, are the noblest attributes of humanity. This is phrenological education, and it is this which you blame parents for carrying into practice.

You have favoured your readers with your impressions of Phrenology, founded avowedly on very imperfect information. Permit me to cite, as a contrast, the testimony of a newspaper, whose editor, *previously to inquiry*, showed hostility equal, if not superior, to your own. After the conclusion of my late lectures in Dublin, the following notice appeared, in the usual editorial form, in the Dublin Evening Mail of 4th May, 1829:—

“ Mr Combe has just finished his course of lectures in this city.  
 “ Speculations of this nature are, it may be said, quite new to the  
 “ Irish public. The subject, until lately, was hardly ever men-  
 “ tioned even in private society; and whenever the unhappy  
 “ Phrenologist was bold enough to advance opinions which he at  
 “ least felt convinced were based upon experiment and reason, the  
 “ best reception he had to expect was the quiet smile of contempt  
 “ or incredulity. No sympathizing friend was to be found for  
 “ whose supporting voice the unfortunate disciple of Gall might  
 “ look, and Phrenology was unhesitatingly classed with animal  
 “ magnetism, alchymy, and astrology. It required no incon-  
 “ siderable share of firmness in the person who should venture  
 “ publicly to advocate a doctrine so despised, who, in the face  
 “ of an intelligent and educated audience, should attempt to sup-  
 “ port, by adequate examples and arguments, not only that Phre-  
 “ nology was not false, but that it was amongst the most import-  
 “ ant truths that have ever been discovered by the human intel-  
 “ lect. This task Mr Combe had the courage to undertake, and  
 “ his endeavours have been crowned with the most complete  
 “ success. The lectures from the first were attended by a most  
 “ respectable class, both as to number and intelligence. As the  
 “ subject became more developed, and the talents of the lecturer

“ better known, the public interest increased in a rapid proportion. Many, who had never before thought on the subject, were induced to attend from motives either of instruction or amusement, and few could leave the lecture-room without carrying away some impressions of the importance of the science, so numerous and varied were the facts and arguments which Mr Combe’s well-stored mind enabled him each day to bring to bear upon the subject under discussion.

“ All through this extensive and arduous course, the illustrations were most happily chosen, the facts clearly and simply laid down, and the reasonings founded upon them acute and convincing. We thought Mr Combe peculiarly happy in his method of treating the intellectual faculties ; and in his refutation of the objections urged against Phrenology, he evidently felt himself on strong ground. The concluding lecture must have come home to the heart of every one present. Who does not recognize that the time is at hand when we are to rescue our children from the evils of a partial and often misdirected education ? What parent does not feel grateful to the philosopher who points the way to better things ; who shows him that the present painful system of confining all minds, however various, to one sole pursuit, has no foundation either in reason or nature ; who tells him that *all* the faculties which he sees budding in his child require his fostering hand, and that, if duly nurtured, *all* will reach that standard of excellence which the Creator has fixed as their limit ? Who can look with an indifferent eye on the man who tells us, even with plausibility only, that society can be most materially amended, not by additional severity, not by the scaffold and the guillotine, but solely by following those laws which God has wisely impressed on man’s nature, and beneficently put in his power to discover for our guidance. Surely such a man deserves the thanks and the blessings of his fellow-men. Surely the science which he advocates demands a serious and impartial examination. If false, it is at worst but the dream of benevolence ; if true, it is the most blessed vision that human intelligence has ever opened to the world.

“ The great applause which Mr Combe received at the close of his labours, considering the intellectual rank of those from whom it came, could not but be grateful to his feelings.\*

“ We understand that the casts used as illustrations by Mr Combe have been purchased by subscription, and are to remain in town, which will give those interested in the study an opportunity of keeping up or improving their knowledge.

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\* The audience was composed of medical practitioners of the first eminence, lawyers of rank and intelligence, fellows of Trinity College, ministers of religion, and other individuals capable, by their talents and attainments, of forming a sound judgment on any subject submitted to their consideration.



“ Should the consequence be the formation of a Phrenological Society, we must say that for our parts we heartily wish it success. Such points of union are wanted in Dublin, and we think the acuteness of observation so well known to be inherent in the Irish character, offers the most favourable augury of phrenological success. Should Mr Combe’s professional pursuits admit of his visiting this country at any future period, we venture to predict that he will find he has not bestowed his labours on an ungrateful soil.”

Weigh this testimony with your own, and I leave to your own mind to decide which is entitled to the highest consideration. In one science you are eminently skilled,—viz. in that of music,—and I would ask whether you are not in the habit of treating lightly the criticisms of persons who obviously “ have never studied it deeply ?” Why then should all rational rules of judgment be reversed in the case of Phrenology, and the opinions of the wholly ignorant, the half-informed, and of every petulant pretender to scientific accuracy who opposes it, be regarded as oracular decisions on its merits ? Why should the eyes of the conductors of the press be shut against the testimony of nature, and their ears closed against the voice of individuals who have dedicated their talents to the study and elucidation of this subject ? Only one answer can be returned to this question. This is the doing of prejudice, and not the result of reason ; and were it not for such misrepresentations as those daily committed by a prejudiced press, the public would be in favour of, instead of being against, the advocates of Phrenology.

But it is now time to enter upon the more specific business of this communication. In a note to p. 13 it is said, that “ the Editor of the Weekly Journal appears fairly to have “ given up his hostility.” This remark was printed on 19th May, and was founded on your silence for several years on the doctrines in question. Your paper of Wednesday, 20th May, however, contained two columns and a half in praise of Mr Stone’s pamphlet and in depreciation of Phrenology, and I now apologize for having supposed that you had become neutral ; I must acknowledge you again as an opponent,

and wish you all the honour and success which ought to reward talent engaged in such a cause.

It is the fashion in what you call the circle "of great weight in science and philosophy" to scoff at Phrenology, and talk slightly of its pretensions; but men's *actions* will sometimes betray the real condition of their minds when they strive most by their words to conceal them. The extreme readiness with which the editors of the Edinburgh newspaper press, with few exceptions, have fallen into the snare laid for them, although not designedly, by Mr Stone,—the large space which they have afforded in their crowded columns, at a busy season, for his lucubrations,—their systematic exclusion of every thing calculated to place before the public mind either the facts or the arguments which are constantly appearing in *favour* of Phrenology, lift the veil, and prove to demonstration that their indifference is affected. By this conduct they indicate a consciousness, that if Phrenology be a great and valuable discovery, they have acted an unworthy part towards it, and have taken their place among those opponents of truth, against whom the voice of posterity is uniformly directed with the heaviest denunciations. Disguise the matter as they will, this feeling is at the bottom of their proceedings. If Phrenology be the exposition of the true functions of the brain, and of the real philosophy of mind, it obviously carries consequences of the greatest magnitude in its train. It will not remove the mystery which hangs over the connexion betwixt mind and matter,—betwixt that which thinks and that which does not think; but it has opened up new and most important views of *the manner* in which the corporeal and mental constitutions of man influence, or act and re-act, on each other; and Dr Gall's name will, in consequence, stand second to none that has hitherto graced the annals of scientific discovery. This is the position which the advocates of Phrenology claim for Dr Gall, who is now consigned to the grave. For themselves, they aspire only to the humble merit of appreciating a great



truth, and defending it against the prejudices of the ignorant, the learning of the wise, the ridicule of the flippant, and the gross misrepresentations of the envious and dishonest. Let the supporters and opponents of Phrenology, therefore, assume their appropriate places. If Dr Gall has *not* discovered the functions of the brain, and founded true mental philosophy, let *his* name, and the names of all his followers, be held up as the scorn and by-words of the present and future generations, until mankind, become weary with contemplating their folly, shall consign them to oblivion, as the most forcible expression of their contempt. But, on the other hand, if he has made such a contribution to human knowledge as entitles him to be ranked as the equal of Galileo, Harvey, and Newton, the other alternative is equally inevitable; his present detractors and opponents will be compelled to take their station along with those individuals who obstructed the discoveries, denied the merits, and embittered the lives of these illustrious men, whom posterity delights to honour. It is the secret conviction that there is substantial truth in this representation of the state of parties, and that the opponents who have any name to lose have not satisfied their own judgments that Phrenology is as unfounded as they affirm it to be, which gives a deep and abiding interest to the controversy, and must form my apology for addressing you on the present occasion.

You say that before Phrenologists “ can obtain general “ belief, they must either lay the proofs of their doctrines before the public in such a plain and familiar shape as to command the assent of the great body of mankind; or, if their “ doctrines are too abstract and profound for ordinary comprehension, they must render them satisfactory to so large a “ portion of the scientific and philosophical world, as to induce “ ordinary persons to credit them on the authority of their superiors in wisdom. If, therefore, we saw the doctrines of “ Phrenology adopted and promulgated by those who deserve “ to be considered the lights of the age, we should have little “ or no hesitation in taking those doctrines for granted, in so “ far as they were founded on investigations beyond our own “ capacity. But, unluckily, this is not the case. No name of

“ great weight in science or philosophy is to be found among  
“ the phrenological ranks.”

In answer to the remark, that “ no name of great weight  
“ in science and philosophy is to be found among the phre-  
“ nological ranks,” I observe, that this objection has very  
frequently been urged, and as often been answered; but  
*prejudice* will neither listen to reason nor profit by the les-  
sons of history. The evidence that this *has been* done shall  
be laid before you at length, that no reader of this Letter may  
be driven to the necessity of either purchasing the works re-  
ferred to, or going in search of them to a circulating library.  
In the “ Elements of Phrenology,” 3d edition, p. 201, under  
the head of “ Objections to Phrenology Considered,” the  
following passages occur :—

“ *Objection.*—The world has gone on well enough with the  
“ philosophy of mind it already possesses, which, besides, is  
“ consecrated by great and venerable names, while Phrenology  
“ has neither symmetry of structure, beauty of arrangement,  
“ nor the suffrages of the learned to recommend it. Its vota-  
“ ries are all third-rate men—persons without scientific or  
“ philosophical reputations. They are not entitled, there-  
“ fore, to challenge the regard of those who have higher studies  
“ to occupy their attention. They complain that only ridicule  
“ and abuse are directed against them, and that no one ven-  
“ tures to challenge their principles or refute their facts; but  
“ they do not yet stand high enough in public esteem to give  
“ them a right to expect any other treatment.

“ *Answer.*—Phrenology being a new science, it follows that  
“ men who possess reputation in physiology or mental philoso-  
“ phy would appear to lose rather than gain renown, were they  
“ to confess their present ignorance of the functions of the  
“ brain and the philosophy of mind, which is a necessary pre-  
“ lude to their adoption of Phrenology; and the subject does  
“ not lie directly in the department of other scientific men.  
“ In this manner it happens, oddly enough, that those who are  
“ most directly called upon by their situation to examine the  
“ science, are precisely those to whom its triumph would prove  
“ most humiliating. Locke humorously observes on a similar  
“ occasion, ‘ Would it not be an insufferable thing for a learned  
“ ‘ professor, and that which his scarlet would blush at, to have  
“ ‘ his authority of forty years’ standing wrought out of hard  
“ ‘ rock, Greek and Latin, with no small expense of time and  
“ ‘ candle, and confirmed by general tradition and a reverend  
“ ‘ beard, in an instant overturned by an upstart novelist? Can  
“ ‘ any one expect that he should be made to confess, that



“ ‘ what he taught his scholars thirty years ago was all error  
 “ ‘ and mistake, and that he sold them hard words at a very  
 “ ‘ dear rate? What probabilities, I say, are sufficient to pre-  
 “ ‘ vail in such a case? And who ever, by the most cogent  
 “ ‘ arguments, will be prevailed with to disrobe himself at  
 “ ‘ once of all his old opinions and pretences to knowledge  
 “ ‘ and learning, which with hard study he hath all his time  
 “ ‘ been labouring for, and turn himself out stark-naked in  
 “ ‘ quest of fresh notions? All the arguments that can be  
 “ ‘ used will be as little able to prevail as the wind did with  
 “ ‘ the traveller to part with his cloak, which he held only the  
 “ ‘ faster.’\* Human nature is the same now as in the days of  
 “ ‘ Locke.

“ ‘ There is, however, another answer to the present objec-  
 “ ‘ tion. Some individuals are born princes, dukes, or even  
 “ ‘ field-m Marshals; but I am not aware that it has yet been an-  
 “ ‘ nounced that any lady was delivered of a child of genius, or  
 “ ‘ an infant of established reputation. These titles must be  
 “ ‘ gained by the display of qualities which merit them; but if  
 “ ‘ an individual quit the beaten track pursued by the philoso-  
 “ ‘ phers of the day, and introduce any discovery, although  
 “ ‘ equally stupendous and new, his reputation is necessarily in-  
 “ ‘ volved in its merits? Harvey was not a great man *before* he  
 “ ‘ discovered the circulation of the blood, but became such in  
 “ ‘ consequence of having done so. What was Shakspeare be-  
 “ ‘ fore the magnificence of his genius was justly appreciated?  
 “ ‘ The author of Kenilworth represents him attending as an  
 “ ‘ humble and comparatively obscure suitor at the court of Queen  
 “ ‘ Elizabeth, and receiving a mark of favour in an ‘ Ah! Will  
 “ ‘ Shakspeare, are you there?’ And he most appropriately re-  
 “ ‘ marks, that here the immortal paid homage to the mortal.  
 “ ‘ Who would now exchange the greatness of Shakspeare for  
 “ ‘ the splendour of the proudest lord that bowed before the  
 “ ‘ Maiden Queen? Or let us imagine Galileo, such as he was  
 “ ‘ in reality, a feeble old man, humble in rank, destitute of po-  
 “ ‘ litical influence, unprotected by the countenance or alliance  
 “ ‘ of the great, poor, in short, in every thing except the splen-  
 “ ‘ did gifts of a profound, original, and comprehensive genius,  
 “ ‘ —and conceive him placed at the bar of the Roman pontiff  
 “ ‘ and the seven cardinals, men terrible in power, invested with  
 “ ‘ authority to torture and kill in this world, and, as was then  
 “ ‘ believed, to damn through eternity; men magnificent in  
 “ ‘ state, and arrogant in the imaginary possession of all the  
 “ ‘ wisdom of their age—and let us say who was *then* great in  
 “ ‘ reputation—Galileo or his judges? But who is *now* the idol  
 “ ‘ of posterity—the old man or his persecutors? The case will

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\* Book iv. c. 20, sect. 11.

“ be the same with Gall. If his discoveries of the functions of  
 “ the brain, and of the philosophy of the mind, stand the test  
 “ of examination, and prove to be a correct interpretation of  
 “ nature, they will surpass, in substantial importance to man-  
 “ kind, the discoveries even of Harvey, Newton, and Galileo ;  
 “ and this age will in consequence be rendered more illustrious  
 “ by the introduction of Phrenology, than by the butcheries of  
 “ Buonaparte, or the victories of Wellington. Finally, the as-  
 “ sertion, that no men of note have embraced Phrenology, is not  
 “ supported by fact. In the New Monthly Magazine for Ja-  
 “ nuary 1823, it is said, ‘ There are many men here (Paris)  
 “ ‘ amongst the most eminent for their medical and physiologi-  
 “ ‘ cal knowledge, who, though differing widely upon other  
 “ ‘ scientific topics, yet agree in saying, that there is much not  
 “ ‘ only of probability, *but of truth*, in the system of Dr Gall.’ ”

Now, permit me to repeat here, that, previously to indulging in declamation on this or any similar topic, on which objections had been stated, and fully replied to, it was obviously your duty, in fairness, to say in what respects you considered the refutation imperfect. The Phrenologists have not evaded but met the objections of their opponents ; and it is a dereliction of all equitable principle to conceal the answers, and urge the objections as if they were original and unrefuted. You are too candid to do this knowingly ; and I urge the fact of your having treated the Phrenologists thus unhandsomely only as a proof that you have not studied their writings.

Your next observation is the following :—“ We believe  
 “ that Phrenology is nowhere on so respectable a footing as  
 “ in our own city.”

This observation may be well-founded ; but I suspect that you are as little acquainted with the progress of Phrenology as with its principles and evidence. The first medical journal of Britain, and, I may say of Europe, viz. the Medico-Chirurgical Review, has long supported Phrenology ; the London Medical and Surgical Journal is decidedly phrenological ; the leading medical journal of the United States, published in Philadelphia, has long advocated the same cause ; a Phrenological Journal of several years’ standing is regularly published in Copen-



hagen ; very recently a prospectus reached this country for reprinting in America the Phrenological Journal of Edinburgh ; the 19th Number of this work contained a long and interesting article communicated by the Phrenological Society of Washington, accompanied by a donation of casts. Dr Spurzheim lectured in Manchester in May, 1829, and his class was numerous and respectable, usually 200 auditors, and sometimes above. They wished him to lecture again in Manchester in October, and collected subscribers to that effect. The medical men particularly seemed anxious to take up Phrenology. In Paris a beautiful medal has been struck on the occasion of the death of Dr Gall. The obverse contains the head of Dr Gall, admirably executed, with his name ; the reverse bears the inscription, " Au Créateur de la Physiologie du Cerveau," and round the margin the places and dates of his nativity and death.

The following extract from the Morning Herald proves that even in Italy an established professor has sacrificed his chair to his faith in this science :—

*" Florence, Oct. 18, 1828.*

" The discussions which occupy all parties here will, I dare say, reach England. The dismissal of the Professor of Anatomy at the Medical College is a sad evidence of the intolerant, persecuting spirit which still rules among the upper powers, and that in the most liberal part of Italy. Not that you in England have any right to wonder, for the world does not forget the storm and the clatter, and the fierceness and the bigotry, which pursued Mr Lawrence some time ago, when somebody or other chose to deduce materialism from his lectures. The accusation against Professor Uccelli is, that he preached the doctrines of Gall and Spurzheim—in other words, heresy, necessity, materialism, Protestantism, atheism, and the devil,—so, when the howl of ignorance and barbarism begins, it is easy enough to find victims. The first point is for those knaves who set on the howlers to cover themselves with the proper mask, and to swear they are influenced by nothing less than a love of virtue and of religion. Uccelli published, in 1826, five volumes on the Organization of the Human Frame. His reputation as a physiologist stands second only to that of Vacca of Pisa. The fourth volume treats of the anatomy of the brain, and may be deemed a defence of

“ the new theory. The discussion is carried on throughout in  
“ a mild, modest, philosophical spirit; and, whatever may be  
“ thought of his system, nothing can be urged against his man-  
“ ner of treating it. I am no convert to the doctrine of the  
“ twenty-seven departments, or boxes of organs, each separate  
“ and distinct; but I honour the man who carries on the duty  
“ of investigation in a frank and fearless temper, and am sure  
“ mankind will be greatly served by the result, be it what it  
“ may. If there be any part of the field of science in which  
“ the whole of the human race are deeply and directly interest-  
“ ed, it is in this—that a correct knowledge be obtained of the  
“ structure and functions of every part of the human frame.  
“ Uccelli is a dexterous controversialist, and was yet more re-  
“ doubtless as he offered to meet his opponents even on what  
“ they deemed their 'vantage-ground, and reconcile Gall with  
“ St Augustine—the teachings of anatomy with the Pope's  
“ Bulls—and experimental physiology with the faith of the Ca-  
“ tholic Church. The priests, however, liked no such ally—  
“ they cannot be better off by discussion—they may be worse  
“ off; and he who is in a rotten ship would be a fool if he  
“ brewed up a storm. But, in the meanwhile, a pamphlet, of  
“ furious invective against the Professor, is published anony-  
“ mously, but was undoubtedly traced to the Medical Sub-  
“ Professor in the same College—one Lippi, who owed his si-  
“ tuation and advancement to Uccelli, and availed himself of  
“ his intimacy, first to seduce Uccelli's wife, and then to tra-  
“ duce his character. What does Uccelli do but cite Lippi be-  
“ fore the tribunals for defamation? and the court decides that  
“ he shall be *temporarily* suspended. Uccelli, indignant at such  
“ a result, proffered his resignation to the Grand Duke, alleg-  
“ ing that he could not possibly continue to be the colleague of  
“ his slanderer and betrayer. But the Grand Duke did not  
“ care to trouble himself about the matter, and would not ac-  
“ cept Uccelli's resignation, and thus the affair seemed to rest:  
“ but now appears another pamphlet, written by a meddling  
“ Professor of Lucca, (Grimaldi), defending Lippi, and holding  
“ up the opinions of Uccelli to the execration of all devout  
“ Catholics. The pamphlet reached the Palazzo Pitti, and dire  
“ indeed was the shock and the horror produced in the minds  
“ of the three Grand Duchesses, who had no notion that such  
“ damnable and devilish notions as those of Uccelli had any  
“ existence in their States. These ladies—pinks of piety, and  
“ peonies of faith—who scarcely ever take a ride without cram-  
“ ming their carriages with wax-candles to present to some Ma-  
“ donna whom they visit in their way—these fair and gentle  
“ ladies hurry, with uplifted hands, long faces, and noisy  
“ tongues, to the Grand Duke, and move him at last to refer Uc-  
“ celli's work to the theological college of Pisa. The college  
“ condemned it, as a thing of course, and Uccelli is sent a-  
“ begging.



“ Two of the Bologna Professors have given similar umbrage  
 “ by preaching *fatalism*: any word will do for a persecutor,  
 “ particularly if nobody understands its meaning. Their names  
 “ are Oricoli and Tommasini. Cardinal Opizoni sent to them  
 “ the following polite message:—‘ I beg to apologize for the  
 “ ‘ trouble I give ; but, as all mankind are not so enlightened as  
 “ ‘ you, you will be so good as not to scandalize them by preach-  
 “ ‘ ing the dangerous and immoral doctrines of Dr Gall:’ and  
 “ the Professors, not less courteous, replied, that they were ob-  
 “ liged by the polite interference, with which they should com-  
 “ ply ; but they have not complied, and a proceeding is ripen-  
 “ ing for deposing them. It is known that both Lippi and  
 “ Grimaldi, who have been fanning this flame of persecution,  
 “ have not the wretched excuse of the ignorant and fanatic—  
 “ they know better ; but in Italy it is difficult for public opi-  
 “ nion to apply its scourges for the punishment of the vile, or  
 “ to stretch out the encouraging hand for the protection of the  
 “ injured.”

Your next objection is, “ When it is considered how many  
 “ years Phrenology has been taught, this total failure in obtain-  
 “ ing proselytes of note forms a presumption by no means fa-  
 “ vourable to the soundness of its doctrine.” This remark also  
 has been anticipated and answered in the *Elements of Phre-*  
*nology* :—

*Objection.*—“ ‘ It is inconceivable, that, after the discovery  
 “ ‘ was made, there should be *any body* who could pretend to  
 “ ‘ doubt of its reality. The means of verifying it, one would  
 “ ‘ think, must have been such as not to leave a pretext for the  
 “ ‘ slightest hesitation ; and the fact that, after twenty years’  
 “ ‘ preaching in its favour, it is far more generally rejected than  
 “ ‘ believed, might seem to afford pretty conclusive evidence  
 “ ‘ against the possibility of its truth.’ ”

*Answer.*—“ Mr Playfair, in his ‘ *Dissertation*,’ prefixed to  
 “ the Supplement of the *Encyclopædia Britannica*, observes,—  
 “ ‘ It must not be supposed that so great a revolution in science  
 “ ‘ as that which was made by the new analysis, (by Newton,)  
 “ ‘ could be brought about entirely without opposition, as in  
 “ ‘ every society there are some who think themselves interested  
 “ ‘ to maintain things in the condition wherein they have found  
 “ ‘ them. The considerations are indeed sufficiently obvious,  
 “ ‘ which, in the moral and political world, tend to produce this  
 “ ‘ effect, and to give a stability to human institutions often so  
 “ ‘ little proportionate to their real value, or to their general  
 “ ‘ utility. Even in matters purely intellectual, and in which  
 “ ‘ the abstract truths of arithmetic and geometry seem alone  
 “ ‘ concerned, the prejudices, the selfishness, or the vanity of  
 “ ‘ those who pursue them, not unfrequently combine to resist  
 “ ‘ improvement, and often engage no inconsiderable degree of



“ ‘talent in drawing back, instead of pushing forward, the machine of science. The introduction of methods entirely new must often change the relative place of the men engaged in scientific pursuits, and must oblige many, after descending from the stations they formerly occupied, to take a lower position in the scale of intellectual improvement. The enmity of such men, if they be not animated by a spirit of real candour and the love of truth, is likely to be directed against methods by which their vanity is mortified and their importance lessened.’ ”—*Dissertation*, part II. p. 27.

“ Mr Playfair, again, speaking of the discoveries of Newton in regard to the composition of light, says, ‘ But all were not equally candid with the Dutch philosopher (Huygens); and though the discovery now communicated had every thing to recommend it which can arise from what is great, new, and singular; though it was not a theory or system of opinions, but the generalization of facts made known by experiments; and though it was brought forward in a most simple and unpretending form,—a host of enemies appeared, each eager to obtain the unfortunate pre-eminence of being the first to attack conclusions which the unanimous voice of posterity was to confirm.’ ”—P. 56. “ ‘ Among them, one of the first was Father Pardies, who wrote against the experiments, and what he was pleased to call the *hypothesis* of Newton. A satisfactory and calm reply convinced him of his mistake, which he had the candour very readily to acknowledge. A countryman of his, Mariotte, was more difficult to be reconciled, and though very conversant with experiment, appears never to have succeeded in repeating the experiments of Newton.’ ”—*Ib.* p. 57.

“ These observations are completely applicable to the case of Phrenology. The discovery is new, important, and widely at variance with the prevailing opinions of the present generation; and its reception and progress have been precisely such as any sensible person, acquainted with the history of science, would have anticipated. ‘ The discoverer of the circulation of the blood,’ says the *Edinburgh Review*,—‘ a discovery which, if measured by its consequences on physiology and medicine, was the greatest ever made since physic was cultivated, suffers no diminution of his reputation in our day, from the incredulity with which his doctrine was received by some, the effrontery with which it was claimed by others, or the knavery with which it was attributed to former physiologists, by those who could not deny and would not praise it. The very names of these envious and dishonest enemies of Harvey are scarcely remembered; and the honour of this great discovery now rests, beyond all dispute, with the great philosopher who made it.’ Posterity will pass a similar judgment on Dr Gall and his opponents.”



Now, if human nature has not changed since the days of Galileo, Harvey, Newton, and Locke, the opposition of men of great weight in science and philosophy is precisely what was to have been expected, provided Phrenology be really a great and important discovery. I should be happy to be informed of a solitary example of an opposite kind,—one in which a man who had poured a stream of light upon a dark and perplexed department of philosophy, who had thereby brought strikingly into view not only the magnificence of the Creator's institutions, but the poverty and meanness of the fictions which the human imagination had previously substituted in their place,—was recognised as a benefactor of his race, and honoured as a superior genius by the "great men" whose feeble errors had thus been placed in painful contrast with the simple yet irresistible and beautiful truths of nature. Farther, are you able to point out any physiology of the brain better than Dr Gall's? or any sufficient reason hitherto assigned by the great in philosophy and science for rejecting it as unfounded?—any refutation of it, in short, which is recognised, not by Phrenologists, but by the public, as subversive of its pretensions? If you cannot indicate such a work, (and the readiness with which you abandon all prior refutations, and the avidity with which you cling to Mr Stone, show that you cannot,) I am well authorised in ascribing the hostility of men of established reputation to prejudice alone.

Because Phrenology has been ridiculed and rejected by men of note, I do not argue that it must necessarily be true; all I contend for is, that, on the known principles of human nature, its truth would not be sufficient to protect it from similar abuse, and therefore that its hostile reception affords no ground for inferring its falsehood.

You charge presumption against the Phrenologists for pretending "to destroy the labours of the whole metaphysical world from Aristotle down to Dugald Stewart;" and one would naturally infer from this, that these labours had been recognised as something substantial, and constituting esta-

blished and useful science. I am enabled, however, to give you a melancholy proof under the hand of Mr Stewart himself, that, even before he had completed the publication of his doctrines, the subversion of his whole fabric by his successor in the University of Edinburgh had been proclaimed to the world, and threatened to disturb the repose of his closing years. The following letter, addressed by Mr Stewart to Dr Poole, in answer to one accompanying a review of Dr Thomas Brown's *Physiology of the Mind*, has been printed by Dr Poole for a different purpose, and sent into pretty extensive circulation. On this account, and as Mr Stewart is now dead, I trust there is no impropriety in introducing it here :—

*“ Kinneil House, 15th June, 1820.*

“ DEAR SIR,—I beg you to accept of my best thanks for your  
 “ kind attention in sending me the last number of your Review.  
 “ From the favourable account you give of *one* of the articles  
 “ contained in it I have no doubt of its merits ; and, had it re-  
 “ lated to any other subject, I should have had much pleasure  
 “ in complying with your request. But, not having yet looked  
 “ into the work which has given occasion to this article, I was  
 “ not in a condition to profit by the strictures of your friend ;  
 “ and I have, therefore, been forced to delay the perusal of them,  
 “ till I shall have more leisure than I have at present any pros-  
 “ pect of soon enjoying. I am now far advanced in years, and  
 “ have but a short time left for completing those tasks for which  
 “ some of your critical brethren are pleased to represent me as  
 “ *pledged* to the public. May I add to this, (in confidence to  
 “ yourself,) that, not having taken up very lightly my philoso-  
 “ phical opinions, I cannot afford to waste my time in the study  
 “ of new theories, which profess to accomplish a complete revo-  
 “ lution in that branch of science to which I have devoted the  
 “ best part of my life ? I must, therefore, during my few re-  
 “ maining years, content myself with plodding on in the beaten  
 “ track, and with treading, as far as I can, in the footsteps of  
 “ those humbler guides whom it has hitherto been my ambition  
 “ to follow. Another consideration also weighs with me not a  
 “ little. The affection which I have always felt for Dr Brown's  
 “ amiable qualities, and the well-known exertions which I made  
 “ to introduce him into the University, impose on me, now that  
 “ he is unfortunately no more, a complete silence with respect  
 “ to his speculations ; and I must, therefore, where there is any  
 “ difference between us in our views, trust to the operation of  
 “ time in establishing the truth. “ DUGALD STEWART.”



Such a letter as this could not have been written by Galileo or Newton on the appearance of a work by any pupil of theirs. Its general tone expresses a feeling of insecurity which these philosophers could never have experienced regarding the stability of their discoveries.

To myself you are kind enough to pay a compliment in the following words:—"Mr Combe, in particular—who seems to be decidedly the next in rank to Spurzheim himself—has displayed powers of so high an order, that we have often been tempted to wish they were exercised upon some object of less equivocal value. But still Mr Combe is merely a Phrenologist—in which capacity alone he has any *status* in the literary world."

Few words will suffice in answer to these observations. You greatly over-rate the extent of my ability; for my strength lies in the goodness of my cause. I have *studied Phrenology*, and read its doctrines directly in the page of nature. What I assert in point of fact, I have seen and handled; and what I maintain in argument, I have found confirmed by practical results. Those who have attacked the doctrines, on the other hand, have not studied them as science; they have not read the facts, on which they found their objections, in the book of nature; and they have not tried how their arguments would harmonize with other ascertained truths, nor how they would issue if carried into practical effect. Full of confidence in themselves, and of contempt for their adversary, each has come to the combat without arms and without armour; and if in some instances the assailant has reeled back from the shock of the encounter, his own weakness was the cause, and not any gigantic strength in him whom he assailed.

I plead guilty of being known to the world only as a Phrenologist. Believing, as I do, that the same Divine Wisdom which ordained the universe, presided also at the endowment of the brain with its functions; that the brain is the organ of the mind, and that mind is the noblest work of God; convinced, also, that this discovery carries in its train the most

valuable improvements in education, morals, and in civil and religious institutions,—I cannot conceive a nobler employment than that of vindicating its claims to consideration, and stemming, to the extent of my feeble ability, the mighty flood of prejudice and injustice with which, like all other important discoveries, it has been deluged. These sentiments are not the ebullitions of mere excited enthusiasm. You will find them stated in sober calmness in a duodecimo volume on the Constitution of Man. To be recognised, hereafter, by impartial and enlightened men, as having been in any degree instrumental in braving the storm of popular derision with which Phrenology was at first assailed, will more than satisfy all the ambition for posthumous fame which ever fired my bosom; and I never was so extravagant as to expect, while alive, any reward from “the great in science and philosophy” except ridicule and dislike. They have chosen their part, and I have chosen mine: the long day will do justice to all.

You proceed,—“Phrenology is founded upon certain propositions, in point of fact, which are averred by its teachers, and which it is incumbent on them to prove. These propositions are perfectly distinct and intelligible—they involve nothing impossible or self-contradictory; and the only question therefore is, are they supported by sufficient evidence? This question the Phrenologists are bound to answer, and they must answer it by bringing forward a complete and irresistible body of evidence. This, we think, they have hitherto been unable to do; and, therefore, we must continue to withhold our assent to their doctrines.”

Any person of ordinary impartiality would presume from these remarks, that you had really made yourself acquainted with the body of evidence which the Phrenologists had brought forward, and found it deficient; but I appeal to yourself whether any inference could be more erroneous. Five complete volumes of the Phrenological Journal, replete with facts, are now published, and I venture to say, that you have not read one of them, putting all your detached efforts in this way together. There are above four hundred skulls and casts in the Phrenological Museum, open



once a-week to your inspection ; and I have good reason to believe that you have never examined twenty of them, or probably one of them, with a view to ascertain whether Phrenology be true. The works of Dr Gall extend to eight 8vo volumes, and are to a very great extent records of observations ; and if you have perused fifty pages of them all, I shall be surprised to learn that your studies have been so extensive. Farther, Dr Spurzheim lectured here in winter 1828, and exhibited evidence in favour of Phrenology to the senses of his hearers ; but you did not attend him. The Phrenological Society has brought forward numerous and highly-interesting facts at its meetings, which have been held once a-fortnight during winter for nine years, to which admission is easily obtained ; but these meetings you did not attend. Finally, I used the freedom to present you with a ticket to my course of lectures commencing in January last ; but you did not honour me with your presence. As you, in these circumstances, have been led to resume your hostility to Phrenology, to excite anew the prejudices of the public against it, to defer, so far as your influence extends, the day when justice shall be done to the merits of Dr Gall and society shall reap the benefits of his discovery, I have considered it my duty to address you in their vindication. The consequences which attend your proceedings confer on them importance. An enlightened press is a powerful check on folly, presumption, and envy, which instinctively delight in the misrepresentation of truth, and the obstruction of its progress : A press, on the other hand, incapable, through ignorance, of discriminating between truth and error, and prone by its prejudices to believe every assertion on one side, and to turn a deaf ear to every testimony from the other, is a public calamity, when the subject of discussion is one of such direct and consequential importance as the physiology of the brain and the philosophy of the mind. It is not, therefore, your opinions as an individual which I arraign, but your conduct as the Editor of an influential journal ; and, in addressing

you even in this character, my object is to win you to impartiality in future, and not to resent injuries which you have unintentionally committed in the past. Towards yourself personally I have long entertained, and hope I shall ever cherish, the sincerest respect, and remain,

SIR,

Your most obedient servant,

GEO. COMBE.

Edinburgh, 30th May, 1829.

THE END.



and the fact that the patient is not in a position to pay for the service is a consideration which should be taken into account in the selection of the patient for the service. The patient should be selected on the basis of his ability to pay for the service, and not on the basis of his social position or his race.

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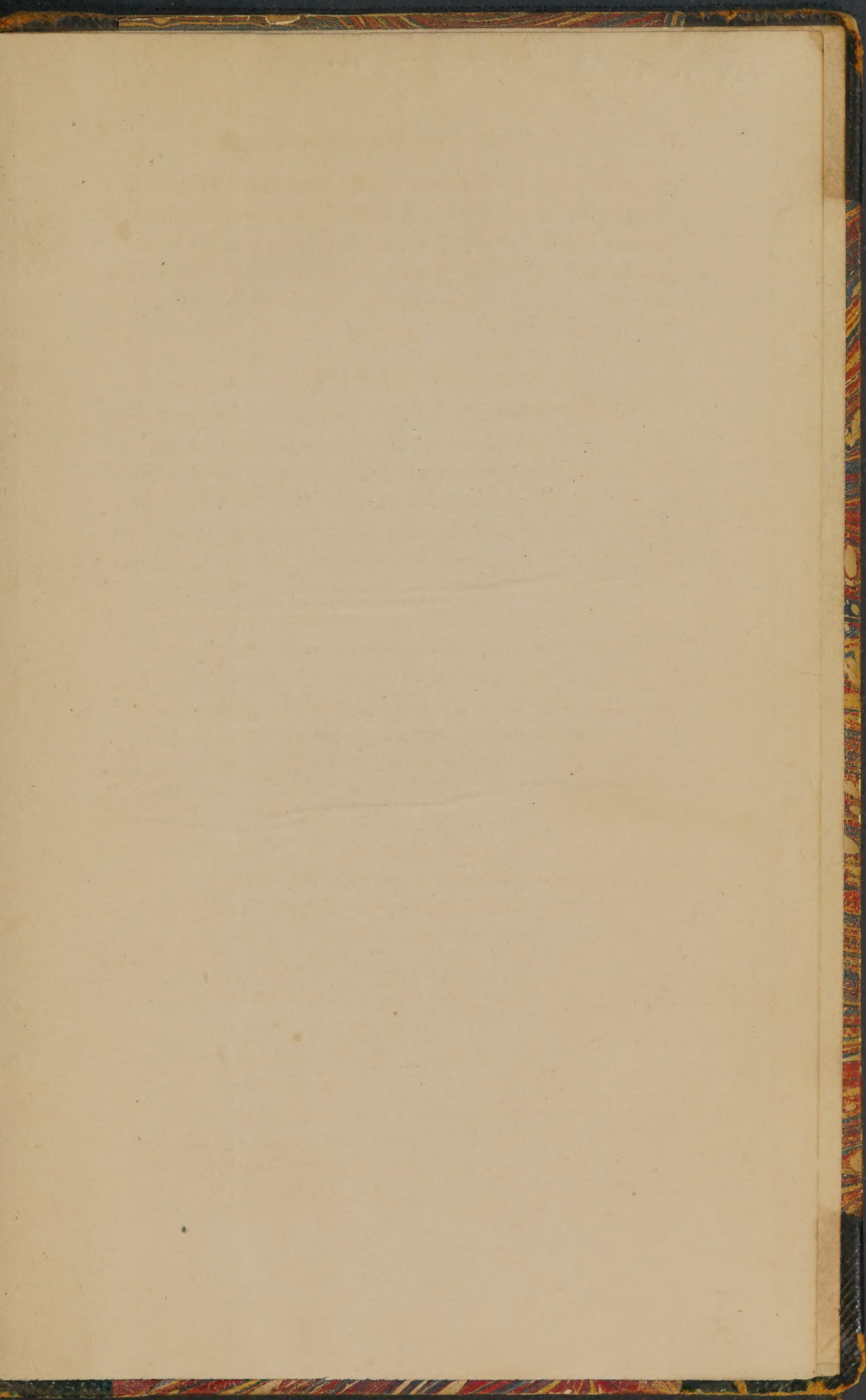
AMERICAN MEDICAL ASSOCIATION

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